DO COMPRESSED IN-PERSON CLASSES YIELD STUDENT PERFORMANCE RESULTS COMPARABLE TO TRADITIONAL 16-WEEK IN-PERSON CLASSES – A MIXED METHODOLOGY APPROACH

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Abstract: Institutions of higher learning are offering an increasing number of compressed in-person classes with the goal of providing to their diverse student populations flexibility of instruction delivery. SIU and many other colleges are offering an increasing number of classes with compressed schedules to increase student enrollment (Krug, et al., 2015). The increase in the number of compressed classes presents the challenge of ensuring that the same academic rigor and breadth of knowledge are maintained in comparison to the traditional 16-week semester. Therefore, it is necessary for the compressed courses to provide the same student learning outcomes and cover the same course material; requiring faculty to use the same textbooks and course content. The purpose of this research study is to determine if students enrolled in off-campus classes with compressed schedules are receiving the same quality of instruction and producing the same student learning outcomes, as students enrolled in traditional on-campus 16-week courses. This study compared the performance of two groups of undergraduate students enrolled in the same Southern Illinois University (SIU) course that was delivered in two different modalities. A mixed methodology was used for data collection, as the researcher was applying quantitative and qualitative inquiry during the study. An independent samples t-test was conducted in SPSS to determine if there was a significant difference between the on-campus and off-campus classes' final course grades. There was no significant difference found between the on-campus and off-campus classes. These results suggest that the delivery format of the course, (traditional 16-week format or compressed off campus weekend format), did not result in meaningful differences in the final course grades for the participating classes.

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CHAPTER I

INTRODUCTION

"Learning Occurs in the Mind Independent of Time and Place" - Plato

Institutions of higher learning are offering an increasing number of compressed in-person classes with the goal of providing to their diverse student populations flexibility of instruction delivery. Compressed courses are offered during a reduced schedule in comparison to the traditional 16-week college semester. Many institutions of higher learning offer two-week compressed courses during the break between the traditional academic semesters. Other compressed courses are provided in six or eight-week formats during the traditional 16-week semester. Such arrangements provide students with increased flexibility by allowing the students to complete two eight-week classes, one after the other. It allows the student to concentrate on fewer courses at one time during the semester.

The compressed courses offer the same number of student contact hours as the traditional 16-week courses. Therefore, it is necessary for the compressed courses to provide the same student learning outcomes (SLOs) and cover the same course material; requiring faculty to use the same textbooks and course content. In addition, compressed courses must require students to complete comparable student performance assessments such as writing-based assignments, quizzes, and examinations (Choudhury, 2017).

Southern Illinois University (SIU) offers a Bachelor of Science in Aviation Management (AVM) at off-campus locations in cooperation with other institutions of higher learning and military installations (SIU-Department of Aviation Management, n.d.). The AVM off-campus program has offered compressed in-person classes since 1975. Many collegiate aviation programs have transitioned from off-campus in-person classes to online programs. However, SIU has continued to offer the off-campus AVM program using compressed in-person classes. SIU provides an option for students who cannot attend in-person classes offered in the traditional 16-week format, but do not want to take online classes.

The SIU off-campus AVM program began in 1975 with one location and grew into 14 locations; including Orange Coast Community College, Mt. San Antonio College, Southwestern Illinois College, Community College of Beaver County, and two Marine Corp Air Stations in North Carolina. Historically, the SIU off-campus AVM program has partnered with military installations using their facilities to deliver the courses. This partnership provided the students the benefit of in-person classes, along with a schedule that accommodates their military schedules. Eventually, SIU started to partner with community colleges, in addition to military installations, to offer the AVM program off campus.

Statement of the Problem

SIU is accredited by the Illinois Board of Higher Education (IBHE). The IBHE reviews institutions of higher education and may grant those institutions both the approval to operate and degree-granting authority (IBHE, n.d.). The Associate Provost for Academic Affairs is responsible for the review of each degree program at SIU. The AVM program is reviewed by the IBHE on an eight-year cycle (SIU-Provost and Vice Chancellor for Academic Affairs, n.d.). Every four years the Department of Aviation Management is required to submit an Assessment

Plan to the Associate Provost for Academic Affairs. The Assessment Plan submitted by an academic department at SIU includes: (1) mission statement, (2) program goals, (3) student learning outcomes, (4) assessment tools, and (5) an action plan.

Because the AVM program has two modalities, on and off-campus, SIU must provide evidence that assessment will be consistent across both modes of delivery and all locations (SIU-Provost and Vice Chancellor for Academic Affairs, n.d.). Furthermore, every year the AVM program must submit an Annual Assessment Report to the Associate Provost for Academic Affairs. The Annual Assessment Report includes the: (1) assessment of SLOs, (2) curriculum or program changes, and (3) changes in department faculty or administration.

SIU and many other colleges are offering an increasing number of classes with compressed schedules to increase student enrollment (Krug, et al., 2015). The increase in the number of compressed classes presents the challenge of ensuring that the same academic rigor and breadth of knowledge are maintained in comparison to the traditional 16-week semester. As increasing number of students pursue classes with compressed schedules, it is difficult to assure that these students are receiving the same quality of education as the traditional students. One method to validate the parity of the two modalities is to evaluate student performance. For this reason, it is necessary for the AVM program to compare student performance at the SIU AVM off-campus locations with those AVM students at the SIU main campus in Carbondale, Illinois.

Purpose of the Study

The purpose of this research study is to determine if students enrolled in off-campus classes with compressed schedules are receiving the same quality of instruction and producing the same SLOs, as students enrolled in traditional on-campus 16-week courses.

This study compared the performance of two groups of undergraduate students enrolled in the same SIU course that was delivered in two different modalities. Data was collected from students enrolled in the AVM 305: Aviation Industry Career Development course taught in the traditional 16-week classroom setting on the SIU main campus in Carbondale, Illinois, and from the students enrolled in the off-campus course taught at the Community College of Beaver County in Monaca, Pennsylvania using the compressed format. The courses used the same curriculum and were taught by the same instructor. The data consisted of course grades associated with student performance assessments and student information collected using a student pre-course survey completed at the beginning of the course and post-course survey completed at the end of the course.

Research Questions and Hypotheses

The following research questions and stated hypotheses were addressed by collecting and analyzing performance assessment data, and information from the student surveys collected from undergraduate students enrolled in SIU AVM coursework:

1. Is there any variance in overall student academic performance after two groups of undergraduate students complete the same Aviation Industry Career Development (AVM 305) course taught in two different modalities, as indicated by comparing students' final course grade?
    a. Null Hypothesis *(H_O)*– There is no variance in overall student academic performance, as indicated by students' final course grade, after two groups of undergraduate students complete the same Aviation Industry Career Development (AVM 305) course taught in two different modalities.

b. Alternative Hypothesis *(H_1)* - There is a statistically significant variance in overall student academic performance, as indicated by students' final course grade, after two groups of undergraduate students complete the same Aviation Industry Career Development (AVM 305) course taught in two different modalities.

2. If there is a variance, which group of students earned higher academic grades on the course performance assessments?
    a. Null Hypothesis *(H_o)* – Both groups of students earned the same academic grades on the course performance assessments with no variance of any statistical significance.
    b. Alternative Hypothesis *(H_1)* – Both groups of students did not earn the same academic grades on the course performance assessments.
3. Are there any variations in overall student academic performance regarding specific performance assessments and the corresponding SLOs between the two student groups?
    a. Null Hypothesis *(H_O)* – The is no variation of statistical significance in overall student academic performance regarding specific performance assessments and the corresponding SLOs between the two student groups.
    b. Alternative Hypothesis *(H_1)* - The is statistically significance variation in overall student academic performance regarding specific performance assessments and the corresponding SLOs between the two student groups.

Significance of the Study

Research has compared the performance of students enrolled in compressed and traditional in-person classes (Sheldon & Durdella, 2010). However, no research has specifically analyzed the performance of students enrolled in an aviation management-related class offered in

the traditional on-campus 16-week format versus the off-campus six-week compressed schedule. The research is unique in that it uses the same instructor, lectures, assessments, and other course materials. Thus, the course format is the only differing factor between how the courses are delivered. Moreover, the sample of students enrolled in each format is homologous as they are primarily traditional college students. This research is crucial to determine if students are receiving the same educational experience when completing the same class using the two different modalities. Focusing on the student learning objectives and the assessments used to determine if the student learning objectives were successfully achieved will allow educators to make adjustments, ensuring parity between the two modalities.

Assumptions & Limitations

For this study, the following limitations and assumption are proposed:

1. This study is limited based upon the voluntary participation of two groups of collegiate aviation students asked to participate in this study. One group consisted of collegiate aviation management students located at the SIU main campus in Carbondale, Illinois. The next group consisted of collegiate aviation management students located at an off-campus location at Community College of Beaver County in Monaca, Pennsylvania. Both groups of students are pursuing a Bachelor of Science in Aviation Management at SIU.
2. This study is limited by certain uncontrollable variables that cannot be accounted for such as student motivation, commitment, and academic aptitude.
3. It is assumed the students answered these questions honestly to the best of their knowledge.

CHAPTER II

LITERATURE REVIEW

Many institutions of higher learning are offering more courses with compressed schedules as this is a method to increase student enrollment (Krug, et. al., 2015). The compressed course format appeals to students that want to earn a college degree but cannot commit to the traditional course format due to family and work commitments (Krug, et al., 2015). It is believed that compressed courses increase student retention, and student retention is needed to increase graduation rates. In 2019, almost two-thirds of jobs in the United States required a postsecondary degree or certificate (Bustamante, 2019). Compressed courses provide students with increased flexibility in comparison to courses taught with the traditional schedule. The compressed schedule allows students to make up more easily missed courses and accommodates transfer students who start class after the traditional semester has begun (Williamson, 2017). The compressed course schedules also allow students to reduce the time needed to graduate. In 2019, it took students in the United States an average of 52 months to complete a bachelor's degree (Bustamante, 2019).

Many institutions of higher learning try to respond to students' needs. Increasingly students have voiced the desire to decrease the time from start studies to graduation (Williamson, 2017). As the costs associated with earning a college degree continue to increase, students look

for ways to shorten the length of time to earn a degree to save money. In 2019, the average total cost of public colleges per year in the United States is $21,950 for in-state and $38,330 for out-of-state (Bustamante, 2019). Studies have indicated that students prefer the compressed courses over traditional formats and that the academic integrity of the courses was equivalent (Williamson, 2017).

Traditional vs. Compressed Courses

Questions have been raised by the collegiate academic community regarding the relationship between course length and course success. Do students enrolled in compressed courses perform as well as those enrolled in traditional 16-week courses? Do students enrolled in compressed courses simply memorize the material quickly and perform well on examinations, due to the benefits of short-term memory? Criteria need to be examined to determine if there is any variation between student success in the two course formats. Furthermore, the possible causes for any variations need to be analyzed.

The compressed format may assist students in remaining focused during the course; however, the reduced length of time to complete the course may overwhelm some students. The optimal learning environment is not the same for all students. For example, one factor that may contribute to students being overwhelmed in a compressed course may be related to the spacing effect. The spacing effect is "a cognitive phenomenon in which distributing to-be-learned information across time in short, interrupted study sessions leads to better long-term retention than continuous, massed sessions" ("Spacing Effect," n.d., para.1). Other students perceive compressed courses to be less challenging than their traditional 16-week counterparts and promote a more productive learning environment (Carman & Bartsch, 2017). Are students who complete compressed courses able to retain the materials learned for future use as well as those

who completed the same course in a traditional format? Due to the spacing effect, students may have increased long-term memory of the course material delivered in the traditional format (Williamson, 2017).

Advantages & Disadvantages

There are many advantages associated with compressed courses. First, compressed courses provide the flexible schedules that work best with the schedules of non-traditional students. Non-traditional students are those individuals who are over 25 years of age. This demographic is increasing as non-traditional students now account for approximately 74% of all college students in the United States ("The Changing Student," 2020). Non-traditional students are the new majority as they outnumber the incoming freshmen who are typically 18 years of age. Since 2008 there has been a decline in birth rate in the United States. This decline contributes to the decreasing number of high school graduates under the age of 25 who are attending college ("The Changing Student," 2020). As stated earlier, institutions of higher learning are trying to attract and recruit the growing population of non-traditional college students. Institutions are trying to accomplish this goal by offering flexible hours to attend classes and rethinking the delivery of the degree programs to accommodate those non-traditional students that have jobs ("The Changing Student," 2020). Carmen & Bartsch (2017) and Anastasi (2007) list other advantages to compressed courses.

- The ability of students to quickly build a relationship with professors,
- An increased focus on learning outcomes by students,
- Increased interaction and participation in class by students,
- Increased attendance,

- Decreased course drop rate and fewer incomplete grades,
- Increased graduation rates because the shorter duration of the course decreased the likelihood students would encounter schedule conflicts with their personal lives that would not allow them to complete the course, and
- Institution's state funding is often linked to graduation rates.

Moreover, students found an increased focus on their coursework during the compressed schedule as opposed to the traditional courses. As a result of the short schedule and increased focus, students reported less procrastination in completing their coursework and an overall better learning experience (Krug, et al., 2015). In simple terms, students in compressed formats do not have the opportunity to procrastinate due to the compressed timeline. These benefits may be attributed to the fact that when taking compressed courses students are enrolled in fewer classes at one time. Taking fewer classes allows students to focus their efforts on only one or two classes at any given time.

There are also several disadvantages associated with compressed courses. Students need to mitigate these disadvantages to be successful in compressed courses. Krug, et al. (2015) and Almquist (2015) list a few disadvantages of compressed courses.

- Student concern related to the amount of course material that needs to be learned within the compressed timeline,
- Some students reported increased mental and physical fatigue,
- Students have less time to study and comprehend the course material,
- Students can quickly fall behind in the course,

- Not all students possess the motivation and discipline to be successful in a compressed course), and
- These courses may not provide the academic rigor and breadth of knowledge provided by the traditional 16-week courses.

It is important to note that although the number of contact hours are the same for both formats, many faculty believe covering large amounts of course material during a compressed timeline will abate the educational value of the course. This illustrates why faculty are often opposed to changing from the traditional 16-week format to compressed formats for the course delivery method (Almquist, 2015).

Overall, studies have indicated that students are more successful in compressed courses regardless of academic ability (Walsh, Sanders, & Gadgil, 2019). Again, the success may be attributed to students' ability to focus on fewer classes at one time, and increased engagement with the professor and fellow classmates. Institutions of higher learning are finding that compressed courses increase student success rates (Walsh, et.al., 2019). Increased student success rates lead to more students remaining in school and earning a degree.

Student Learning Outcomes, Performance, & Assessment

It is important to distinguish between SLOs and grades. Although grades may vary between the traditional 16-week and compressed courses, the SLOs prescribed for the courses remain the same. The SLOs are what the student is expected to learn. The SLOs define what students will know and the observable skills acquired after course completion. The SLOs for AVM 305: Aviation Industry Career Development course are provided in Table 3. They provide evidence that learning has taken place during the course (Oxnard College, n.d.). The student

performance assessments allow the faculty to determine if student learning objectives were achieved. The AVM 305: Aviation Industry Career Development course description and objectives are listed in Tables 1 and 2. In contrast, grades evaluate student performance and quality of a student's work.

Table 1

AVM 305 Course Description

AVM 305: Aviation Industry Career Development – Course Description
The course provides an overall description and forecast of the employment possibilities in the aviation industry, as well as specific information regarding how to apply for such employment. Also covered is the preparation of the future aviation professional for the search for employment including such items as personal assessment, resume construction, interviewing skills, writing letters of appreciation, the use of references, networking, employment referral agencies/services, and continuing education.

Table 2

AVM 305 Course Objectives

AVM 305: Aviation Industry Career Development - Course Objectives
1. Students will be able to identify elements unique to the aviation industry and find information related to internships, professional development opportunities, and company-specific employment information.
2. Students will be able to assess their personal skills and strengths and be able to articulate them in a way that support a career plan.
3. Students will be able to develop effective written documents related to the job search process, including resume, cover letter, and follow-up correspondence.
4. Students will be able to effectively prepare for an in-person or online interview.
5. Students will create or develop their professional network and demonstrate the ability to create a professional online networking profile and social media presence.
6. Students will develop a personal continuing education plan as it relates to professional career development.

Table 3

AVM 305 Student Learning Outcomes (SLOs)

AVM 305: Aviation Industry Career Development course supports the following AVM Student Learning Outcomes:
SLO1: Ability to communicate orally and in writing in formal and informal situations.
SLO5: Describe the scope of aviation management career options and demonstrate the importance and need for life-long learning and professional development.

SLO8: Make professional and ethical decisions.

It is imperative that compressed courses be equivalent to the courses offered during the traditional 16-week semester. Several factors require consideration to ensure parity of compressed and traditional courses. The compressed courses must maintain the same academic rigor and breadth of knowledge as their traditional 16-week counterparts. Academic rigor is a standard of quality that faculty expect of their students. The standards to measure academic rigor can vary in objectivity based upon the performance assessment used (Williamson, 2017). Breadth of knowledge refers to the extent or span of knowledge which a student possesses about a subject.

The ability of students to meet or exceed academic standards is influenced by the quality of the learning experience received by the student. The quality of the student learning experience is influenced by the characteristics of the faculty, teaching methods, classroom environment, and evaluation methods (Scott, 2003). Faculty are responsible for the overall learning experience provided to the students. It is essential that faculty have an enthusiasm for teaching the students. Faculty must also be willing to learn from and engage with the students. Moreover, student orientation is necessary because students need to know that the faculty cares about them and wants to assist them achieve their educational goals (Scott, 2003).

Limiting Parameters

A substantial amount of research has been conducted to evaluate whether students in classes with compressed schedules are receiving the same quality of education and producing the same SLOs as students in traditional 16-week courses. The methodology used for each study examined three parameters that would affect the research findings: course length, course

logistics, and the measures to compare the two class formats (Walsh, et.al., 2019). It is important to consider that course length varies based upon the preexisting academic structures. For example, a traditional semester is not always 16 weeks in length and the compressed format can range from 1 week to 8 weeks. Course logistics can have a substantial influence on student learning. The student population, course assignments, and the academic term when the course is offered need to be considered when analyzing study results. The measures used to compare the two course formats need to be considered when analyzing the results of studies (Walsh, et. al., 2019). For instance, some studies have compared the final grades as the primary measure of student achievement, while other studies have used student learning objectives as the measure.

Research on Student Performance

A study was conducted by Carnegie Mellon University that compared match-pair courses and student learning (Walsh, et al., 2019). The primary difference between the match-pair courses was that one class was 6 weeks in length while the other was 14 weeks. The study used the final grades as the primary measure of student learning. The study also used student surveys, pre-tests and posttests to provide additional information. When the study used the final grades as the only indicator of student learning, the students in the compressed format performed better than their 14-week counterparts. However, when the students' scores on the pre-tests and posttests were evaluated, in addition to the final grades, there was no apparent difference in student learning between the two groups (Walsh, et. al., 2019).

Several studies have found that students of all ages who are enrolled in compressed classes have higher grades and lower withdrawal rates compared with students enrolled in the traditional 16-week semester (Carman & Bartsch, 2017). Several factors can influence these findings. First, the social presence of students in the classroom is more prominent during a

compressed format. The students interact among each other and the instructor more frequently during the compressed courses. Second, students indicated they had a deeper learning experience during the compressed courses. Due to the compressed schedule, students have a more immersive learning experience, which may explain why students enrolled in compressed courses reported that they had a deeper learning experience compared with the traditional 16-week format (Choudhury, 2017). The compressed format provided a more concentrated and focused learning experience. Finally, students in compressed courses indicated they devoted more time and energy to their coursework. However, a study conducted by Brigham Young University indicated that there was no significant difference in the amount of time students spent completing coursework outside of the classroom between the two course formats (Lutes & Davies, 2017).

Another study analyzed the relationship between course length and student success. The results indicated that those students enrolled in the compressed courses experienced higher course success and completion rates when compared to those enrolled in the traditional 16-week format (Sheldon & Durdella, 2010). The results were the same when accounting for demographic factors such as age and ethnicity. However, women were more likely to be successful in a compressed course than men, but the same results were true for the traditional 16-week course. Nontraditional students experienced increased student success in the compressed courses (Shelton & Durdella, 2010). Overall, students of all ages performed better in compressed courses.

Southern Illinois University

Southern Illinois University (SIU) has a high student success rate in the AVM off-campus program. There are several factors that determine an academic program's success;

however, graduation rate for students is one of the most important factors. Over the last two years, the AVM off-campus program had a high graduation rate. This study compares student performance at an SIU AVM off-campus location with the AVM students at the SIU main campus in Carbondale, Illinois. The off-campus location is at the Community College of Beaver County in Monaca, Pennsylvania. Those students at the off-campus locations are enrolled in compressed in-person classes, while those students at the main campus are enrolled in the traditional 16-week classes.

The Bachelor of Science in Aviation Management (AVM) builds on the technical training in aviation maintenance, flight, avionics technology, air traffic control, aircraft operations support, military, and government agencies (SIU-Department of Aviation Management, n.d). Students can modify their studies to specialize in areas such as:

- Airlines
- General Aviation operations
- Finance
- Safety
- Regulations
- Air traffic control
- Maintenance management
- Airport planning and management (SIU, n.d.)

Currently, as shown in Table 4, SIU offers its AVM undergraduate degree program at the following off-campus locations:

Table 4

SIU Off-Campus Locations

Location	% Nontraditional Students
Orange Coast College – Costa Mesa, CA	46%
Mt. San Antonio College – Walnut, CA	49%
Community College of Beaver County – Monaca, PA	10%
Southwestern Illinois College – Belleville, IL	33%
Marine Corps Air Station Cherry Point – Havelock, NC	100%
Marine Corps Air Station New River – Jacksonville, NC	100%

The AVM students in the off-campus program complete all the required AVM courses utilizing the compressed format. The students complete three courses during the 16-week semester; however, they are enrolled in only one class at one time. Students meet on Saturdays and Sundays, every other weekend, from 8:00 A.M. until 4:50 P.M. for six weeks. The AVM off-campus schedule for the fall 2021 semester is provided in Table 5:

Table 5

Fall 2021 Course Schedule for Off-Campus Courses

Courses	Dates
Course – 1	**August 28 – September 26**
Weekend 1	August 28 & 29
Weekend 2	September 11 & 12
Weekend 3	September 25 & 26
Course – 2	**October 2 – October 31**
Weekend 1	October 2 & 3
Weekend 2	October 16 & 17
Weekend 3	October 30 & 31
Course – 3	**November 6 – December 5**
Weekend 1	November 6 & 7
Weekend 2	November 20 & 21
Weekend 3	December 4 & 5
Course – 4	**August 28 – December 5**
Independent Study course or Internship course	Taught throughout the entire 16-week semester

The course schedules for the AVM 305 courses during the fall 2021 semester at the off-campus location at CCBC and main campus location at SIU are provided in Tables 6 and 7.

Table 6

Fall 2021 AVM 305 Course Schedule at CCBC

Date	Time
November 6	8:00 A.M. – 12.00 P.M. 12:00 P.M. - 1:00 P.M. (Lunch Break) 1:00 P.M. – 4:50 P.M.
November 7	8:00 A.M. – 12.00 P.M. 12:00 P.M. - 1:00 P.M. (Lunch Break) 1:00 P.M. – 4:50 P.M.
November 20	8:00 A.M. – 12.00 P.M. 12:00 P.M. - 1:00 P.M. (Lunch Break) 1:00 P.M. – 4:50 P.M.
November 21	8:00 A.M. – 12.00 P.M. 12:00 P.M. - 1:00 P.M. (Lunch Break) 1:00 P.M. – 4:50 P.M.
December 4	8:00 A.M. – 12.00 P.M. 12:00 P.M. - 1:00 P.M. (Lunch Break) 1:00 P.M. – 4:50 P.M.
December 5	8:00 A.M. – 12.00 P.M. 12:00 P.M. - 1:00 P.M. (Lunch Break) 1:00 P.M. – 4:50 P.M.

Table 7

Fall 2021 AVM 305 Course Schedule at Southern Illinois University – Main Campus

Date	Time
August 17	6:00 P.M. - 8:50 P.M.
August 24	6:00 P.M. - 8:50 P.M.
August 31	6:00 P.M. - 8:50 P.M.
September 7	6:00 P.M. - 8:50 P.M.
September 14	6:00 P.M. - 8:50 P.M.
September 21	6:00 P.M. - 8:50 P.M.
September 28	6:00 P.M. - 8:50 P.M.
October 5	6:00 P.M. - 8:50 P.M.
October 12	6:00 P.M. - 8:50 P.M.
October 19	6:00 P.M. - 8:50 P.M.
October 26	6:00 P.M. - 8:50 P.M.
November 2	6:00 P.M. - 8:50 P.M.
November 9	6:00 P.M. - 8:50 P.M.
November 16	6:00 P.M. - 8:50 P.M.
November 30	6:00 P.M. - 8:50 P.M.

This compressed weekend schedule meets the needs of traditional and nontraditional students. The AVM off-campus program is particularly attractive to nontraditional students with previous aviation-related experience and training. In four semesters the students complete the 48 semester hours in the compressed weekend format. Each semester the students complete three seated courses, nine semester hours, and one independent study course of three semester hours. Students complete 12 semester hours each semester. The students complete 12 seated courses and four independent study courses as part of the AVM off-campus program (SIU-Department of Aviation Management, n.d.). Table 8 lists the off-campus AVM courses offered in the compressed weekend format:

Table 8

List of Off-Campus AVM Courses

Course ID	Course Title
AVM 300	Introduction to Aviation Management Research
AVM 301	Aviation Management Writing & Communication
AVM 320	Aviation Internship
AVM 349	Readings in Aviation Management
AVM 370	Airport Planning
AVM 304	Industry Regulations
AVM 372	Airport Management
AVM 373	Airline Management
AVM 374	General Aviation Operations
AVM 410	Legal Aspects of Aviation
AVM 376	Aviation Maintenance Management
AVM 420	Aviation Safety Management
AVM 430	Air Transport Labor Relations
AVM 440	Fiscal Aspects of Aviation Management
AVM 401	Analysis of Issues in the Aviation Industry
AVM 305	Aviation Industry Career Development
AVM 450	Management Problems in the Aviation Industry

CHAPTER III

METHODOLOGY

This chapter outlines the research design, a theoretical perspective, participants, data collection, instruments, and data analysis related to the study; and also provides a summary. The purpose of this research study is to determine if students enrolled in off-campus classes with compressed schedules are receiving the same quality of instruction and producing the same SLOs, as students enrolled in traditional on-campus 16-week courses.

This study compared the performance of two groups of undergraduate students enrolled in the same SIU course that was delivered in two different modalities. Data was collected from students enrolled in the AVM 305: Aviation Industry Career Development course taught in the traditional 16-week classroom setting on the SIU main campus; and from students enrolled in the same off-campus course taught at the Community College of Beaver County using the compressed format. The data consisted of course grades associated with student performance assessments and student information collected using a student pre-course survey completed at the beginning of the course and post-course survey completed at the end of the course.

Theoretical Perspective

Grounded theory was used in this study because it enabled the researcher to identify patterns through comparison and contrast. This approach enables the development of a theory that can be used to answer the research questions. Grounded theory is data driven, systematic,

and prescriptive. Quantitative data was collected through the student performance assessments. This data clearly indicates which group of students achieved higher academic performance. Closer analysis of the data indicates patterns regarding which group of students performed higher on certain performance assessments. The analysis assists in determining SLOs. The data indicates variations in performance assessment and achievement of SLOs.

Grounded theory explains what has been observed; allowing the researcher "to ask what is happening in these data." (Patton, 2015, p.110). The student performance assessment data does not tell the entire story. Grounded theory also allows the researcher to engage in qualitative inquiry. It is important to collect qualitative data to identify and understand latent patterns. Qualitative inquiry is necessary to understand and explain the quantitative data. The data was collected through the student surveys consisting of closed and open-ended questions. Data was collected about the students' demographics, previous educational experience, and other facts. Additional information was collected from the Instructor Course Evaluation completed by the students at the end of the course.

Grounded theory helps to understand the meaning of the results of the research and gain a deeper understanding of the data. The quantitative data of student performance assessments provide information that can be vague; however, qualitative inquiry allows the researcher to dig beneath the surface to uncover latent patterns that may provide accurate answers to research questions.

Research Questions and Hypotheses

The following research questions and stated hypotheses were addressed by collecting and analyzing performance assessment data, and information from the student surveys collected from undergraduate students enrolled in SIU AVM coursework:

1. Is there any variance in overall student academic performance after two groups of undergraduate students complete the same Aviation Industry Career Development (AVM 305) course taught in two different modalities, as indicated by comparing students' final course grade?
    a. Null Hypothesis *($H_{O)}$* – There is no variance in overall student academic performance, as indicated by students' final course grade, after two groups of undergraduate students complete the same Aviation Industry Career Development (AVM 305) course taught in two different modalities.
    b. Alternative Hypothesis *(H_1)* - There is a statistically significant variance in overall student academic performance, as indicated by students' final course grade, after two groups of undergraduate students complete the same Aviation Industry Career Development (AVM 305) course taught in two different modalities.
2. If there is a variance, which group of students earned higher academic grades on the course performance assessments?
    a. Null Hypothesis *(H_o)* – Both groups of students earned the same academic grades on the course performance assessments with no variance of any statistical significance.
    b. Alternative Hypothesis *(H_1)* – Both groups of students did not earn the same academic grades on the course performance assessments.
3. Are there any variations in overall student academic performance regarding specific performance assessments and the corresponding SLOs between the two student groups?

a. Null Hypothesis *(H_O)* – The is no variation of statistical significance in overall student academic performance regarding specific performance assessments and the corresponding SLOs between the two student groups.
b. Alternative Hypothesis *(H_1)* - The is statistically significance variation in overall student academic performance regarding specific performance assessments and the corresponding SLOs between the two student groups.

Research Design

This study is based upon applied research and focuses on the academic performance of students enrolled in off-campus compressed classes compared with the performance of those enrolled in on-campus traditional semester-long classes. The basis of this research study is applied research because the focus is finding solutions to a problem (Basic vs Applied, 2020). As stated previously, the purpose of this research is to determine if there are variations in student performance based upon the course schedule used to deliver the course materials. It is crucial that comparable SLOs be achieved in both modalities. Parity concerning academic rigor and breadth of knowledge must be maintained for all students.

Actions cannot be taken to achieve parity between the two student groups without an accurate analysis of the factors that contribute to this variation in student performance. This research attempts to uncover factors, previously not considered, that are contributing to any significant disparity in student performance. Once data collection and analysis are complete, the factors that contribute to the disparity in student performance become visible. Only then can an effective solution be developed that mitigates these factors to ensure parity among both groups of students.

A mixed methodology was used for data collection, as the researcher was applying quantitative and qualitative inquiry during the study. Qualitative and quantitative research are not mutually exclusive; rather they complement each other (Patton, 2015). There is a need for the hard data that quantitative research provides; however, the soft data that qualitative analysis provides fills the gaps left by quantitative data or provides needed context. Often quantitative research provides hard data, but it is difficult to accurately deduce the causation. Using the two research methods allows the researcher to view the findings of the research in its totality (Patton, 2015). In other words, combining the two research methods allows the researcher to develop accurate and comprehensive conclusions. The purpose of the mixed-method research approach was to determine if there are variations in student performance based upon the course schedule used to deliver the course materials**.**

Mode of Investigation

Naturalistic inquiry requires the researcher to collect data in a real-world setting, without affecting the results of the research (Patton, 2015). The researcher is the instrument used to collect the data; therefore, human bias will affect the investigation to some extent (Patton, 2015). It is the researcher's duty to identify their biases to minimize any distortion of the data collected. The focus of natural inquiry is to observe the study participants in their natural setting with minimal interference and bias. Qualitative data was collected through open-ended questions provided in a student questionnaire and observations of the students in the classroom. The students were observed in a real-world setting: the classroom.

Population and Sample

This research used purposeful and comparison-focused sampling. "Comparison-focused sampling looks in depth at the significant similarities and differences between cases and the factors that explain those differences" (Patton, 2015, p. 277). Both qualitative and quantitative inquiry were used to collect data; however, the data provided by qualitative inquiry is crucial for providing an accurate and meaningful comparison. This research used the comparison-focused sampling strategy with attention to the matched-comparisons approach.

Purposeful sampling focuses on a smaller sample to allow for a comprehensive analysis, rather than a larger sample which can provide more data and accuracy (Creswell & Creswell, 2018). This study focuses on depth by selecting a smaller sample size. Data was collected from two groups of students; one group was enrolled in the on-campus traditional 16-week format, and the second group of students was enrolled in the off-campus course taught in a six-week compressed format. The total enrollment for both course formats was 40 students. There were 14 students enrolled in the course using the traditional 16-week format. These students were located at the SIU main campus in Carbondale, Illinois. There were 26 students enrolled in the course using the compressed format. These students were located off campus at the Community College of Beaver County located in Monaca, Pennsylvania. The compressed format students are part of the SIU AVM off-campus academic program.

Qualitative inquiry allows for an in-depth study of both groups of students. This study would not be possible if a large sample size was used. The smaller sample size allows for focus on the trends involving behavior and characteristics of the students and discover details not provided in previous research (Wiggins & Stevens, 2016). This qualitative data is needed to explain the quantitative data collected through student performance assessments. The

quantitative data demonstrates how each group of students performed, but the qualitative data helps to answer the question of why these students performed as they did.

The selection of the students for participation in the research was based upon their enrollment in the AVM 305 courses. The students were not excluded from participating based upon academic level or academic status. The study did not discriminate based on gender, race, religion, or ethnicity. All the students that participated were volunteers and received no compensation for participating in the study.

Validity and Reliability

The research must be valid to ensure that findings are accurate and truthful. Triangulation is one method to ensure validity of research findings. Triangulation requires use of more than one method to collect data on the same topic (Patton, 2015). Naturalistic inquiry is based upon the concept that qualitative inquiry is dynamic. During qualitative inquiry there are many moving parts and how data collection unfolds is unpredictable. As a result, the uncertainty of naturalistic inquiry may make triangulation challenging.

The following components were used to validate the quantitative data (grades) collected from the student assessments (assignments and quizzes): (1) student participation during lectures, (2) student behavior and interaction during class activities, (3) attendance, and (4) student surveys completed at the beginning and end of the course. Personal observations were documented in a journal indicating class participation of students during lectures and interaction during class activities.

Credibility and Objectivity

Reflexivity ensures credibility of the research through the continual evaluation of perceptions and biases. The focus of reflexivity is continual self-awareness (Patton, 2015). Continual self-evaluation helps to identify any bias or perceptions that would skew the collection and evaluation of data.

Empathic neutrality is helpful for recognizing preconceived notions. The goal is to seek objectivity, understanding that absolute objectivity does not exist. In the classroom it is important to engage and interact with the students while maintaining professionalism. The goal is for the research to be authentic and credible. To achieve this result, it is important not to rely on preconceived notions to make judgments about findings. Two important questions must continually be answered: (1) What do I Know? and (2) How do I know it? Contextual factors such as age, gender, occupation, and educational values assisted in the analysis of the quantitative and qualitative data to create a comprehensive picture that provides answers to the research questions.

Procedures

On the first day of class, the students were given a cover letter that explained the purpose and importance of the study. The cover letter also informed the students how their confidentiality would be protected if they chose to participate, and that participation was strictly voluntary (Appendix A). The students were given 10-15 minutes to read the research overview letter and were given time to ask the researcher any questions regarding the study. After all questions were answered, the researcher left the classroom, and a class liaison distributed the

informed consent forms (Appendix B). The students were given as much time as needed to read and sign the consent forms if they chose to do so.

Next, the class liaison created an anonymized list of participants based upon the signed consent forms. Each student was assigned a number that was used to identify the student for the remainder of the study to protect their confidentiality. Fourteen (n=14) on-campus and 26 (n=26) off-campus students participated in the research study. The class liaison then distributed the student pre-course survey (Appendix C). One on-campus student and one off-campus student did not complete the pre-course survey. Students were given as much time as needed to complete the survey. The signed consent forms, anonymized participant list, and student pre-course surveys were sent, by the class liaison, to a faculty member on the dissertation committee for this study.

On the last day of class, the class liaison distributed to the students the post-course survey (Appendix D). All of the on-campus students completed the post-course survey, but two off-campus students did not complete the post-course survey. The researcher was not present in the classroom and the students were given as much time as needed to complete the survey. The student post-course surveys and anonymized participant list were sent, by the class liaison, to the faculty member on the dissertation committee for this study. The students had one additional week, after the last day of class, to complete the Instructor Course Evaluation (ICE) survey on D2L (Appendix E). The results of the ICE survey are anonymous. To conclude the data analysis, an independent samples t-test was conducted in SPSS to analyze the quantitative, demographic, and qualitative data to produce frequency and correlation tables.

Data Collection

The qualitative data from the research study was collected through naturalistic inquiry. The student pre-course survey provided a great deal of qualitative data about the students that could not be realized through student performance assessments. Specifically, the student pre-course survey collected information such as demographics, educational history, and other pertinent information (Appendix C).

Going into the classroom is analogous to going into the field. Classroom work allows for the observation of student behavior that has not been investigated in previous research. The interaction in the classroom setting provides additional information that cannot be included in a survey or student performance assessment.

1. Does the student ask questions during class?
2. When asked a question, can the student use critical thinking to formulate an answer?
3. Is the student engaged during the class?
4. During in-class activities/projects which students emerge as the group leaders?

This qualitative data was analyzed to illuminate the quantitative data. Without this valuable qualitative data, the quantitative data gathered from the student performance assessments stands as it is yet provide little understanding. All students have a story that explains their experiences and how those experiences have shaped their ideas and behaviors. Analyzing the quantitative data through this lens allowed the research to provide credible answers to the research questions.

Research Instruments

The student pre-course survey consisted of 12 closed and 10 open-ended questions for a total of 22 questions. The questions for the student pre-course survey are provided in Appendix C. The student post-course survey consisted of 10 statements using a 5-point Likert scale, followed by six open-ended questions. The Likert scale statements and open-ended questions for the student post-course survey are provided in Appendix D.

The student performance assessment data was collected based upon the following course assessments and assignments:

1. Three quizzes
2. Discussion Post #1 – Career plan
3. Discussion Post #2 – Skills inventory
4. Discussion Post #3 – Business cards
5. Discussion Post #4 – Elevator speech
6. Discussion Post #5 – Interview questions
7. Discussion Post #6 – Personal reflection
8. Assignment #1 – Personal brand statement
9. Assignment #2 – Cover letter
10. Assignment #3 – Mock interview
11. Assignment #4 - Resume
12. Attendance

Additional data was collected from the Instructor Course Evaluation (ICE) surveys completed by the students at the end of the course (Appendix E).

Data Analysis

The data analysis consisted of an independent samples t-test conducted in Statistical Package for the Social Sciences (SPSS) to determine if there was a statistically significant difference between the two student groups. SPSS was also used to examine quantitative data to produce frequency and correlation tables. The *t*-test was used to determine if there was a statistical difference between the overall academic performance of the on-campus and off-campus students. The *t*-test is an inferential statistic that is used to determine if there is any statistical variance between two groups (Bevans, 2020).

Using a *t*-test establishes a null hypothesis by assuming the means of the two groups are equal (Fernandez, 2020). If the *t* -test rejects the null hypothesis, then there is statistically significant variance between the groups. The p-value is the probability that you would obtain your results by chance (Fernandez, 2020). The critical value for this research study is $\alpha = .05$ and will be compared to the p-value from the *t*-test results:

- p_value > α (.05): Fail to reject the null hypothesis of the statistical test.
- p_value ≤ α (.05): Reject the null hypothesis of the statistical test.

The critical value of 0.05 means that, if an experiment is performed 100 times, 5% of the times the null hypothesis will be rejected and 95% it will not.

Pearson's *r* was used to measure the strength of a relationship between two variables. The Pearson's *r* correlation coefficient is expressed between -1 and 1 (Tabachnick & Fidell, 2018). The correlation coefficient formulas calculate a value between -1 and 1, where (1) 1 indicates a strong positive relationship, (2) -1 indicates a strong negative relationship, and (3) a result of zero indicates no relationship at all (Glen, n.d.).

Initially data measures were input into Microsoft Excel to develop a master data spreadsheet, containing the data set, for data inspection, cleaning, and transformation. The data set was inspected to be certain all the values recorded in the data set were accurate and labeled correctly. The students were given unique anonymized identifiers so the two groups could be distinguished. The next phase of the analysis was cleaning the data set. The data set was inspected for missing data to determine that any missing data represented less than 5% of the total data (Tabachnik & Fiddell, 2018). The scores for the student assessments were changed from fractions to integers so it could be imported to SPSS. Finally, transforming the data set was completed to remove categories of data that would not be considered for statistical analysis.

The mixed methodology approach was used for this research study. The data analysis consisted of three phases: (1) analysis of the quantitative data; (2) analysis of the qualitative data; and (3) analysis of how the qualitative data explains the qualitative data. This qualitative data is needed to explain the quantitative data collected through student performance assessments. The quantitative data demonstrates how each group of students performed, but the qualitative data helps to answer the question of why these students performed as they did. The three research questions for this study were addressed using quantitative data collected from the students' grades on the course assessments. The quantitative data was supplemented by qualitative data gathered from the student pre- and post-course surveys. The qualitative data was analyzed from the student pre- and post-course surveys were used to identify patterns and opinions that could explain the results from the quantitative data (Empower, n.d.).

A Likert scale was developed to quantify two segments of the qualitative data in the student pre-course survey. The fourteenth demographic question from the student pre-course survey (Q14) asked students to indicate their level of interest in aviation industry career

development and question eighteen (Q18) asked students how motivated they are to complete a college degree. A Likert scale was developed to quantify the student responses to these two questions so the data could be imported to SPSS. The Likert scale consisted of five responses: (1) low, (2) fair, (3) moderate, (4) high, and (5) very high.

Ethical Assurances

Human subjects were an integral part of this study; therefore, this research study was conducted in accordance with Institutional Review Board (IRB) requirements established by the OSU Office of University Research Compliance (URC). The SIU Office of Research Compliance (ORC) was notified of the research study and accepted the OSU URC's approval of the research study. The researcher obtained IRB approval on June 24, 2021 and the study was filed as IRB-21-256 (Appendix F). The researcher did not begin collection of the data before obtaining IRB approval.

An informed consent form was provided to each participant to review prior to choosing to participate in the study. The informed consent form clearly stated the purpose of the study and the rights of the participants to participate on a voluntary basis. In addition, the informed consent form included information regarding the researcher, purpose for collecting the information from the participants, confidentiality of all information collected from the participants, measures taken to ensure anonymity, risks and benefits to research participants, and contact information of the researcher, faculty advisor, and IRB. The informed consent form is located in Appendix B.

Summary

The foundation of the research is the qualitative data collected from the participating students. The naturalistic inquiry design strategy provides the framework that minimizes manipulation and bias within the research. The personal experience and engagement fieldwork strategy was used to collect in-depth qualitative data in the classroom setting. The quantitative and qualitative data collected during the research has been woven together to view the data set in its totality. The data, viewed as a whole, tells a story about the students' education experience. This approach to research yields credible answers to the research questions. Ultimately, this approach will help SIU to ensure that all students receive the same quality of education regardless of modality.

CHAPTER IV

RESEARCH FINDINGS

The findings of the research study were analyzed to determine if students enrolled in off-campus classes with compressed schedules are receiving the same quality of instruction and producing the same SLOs, as students enrolled in traditional on-campus 16-week courses.

Quantitative Results – t-Test

An independent samples t-test was conducted in SPSS to determine if there was a significant difference between the on-campus and off-campus classes' final course grades. There was no significant difference found between the on-campus (M=83.4, SD=10.3) and off-campus (M=86.3, SD=10.2) classes; $t(36) = -.82$, $p = .417$. These results, Table 9 and Table 10, suggest that the delivery format of the course, (traditional 16-week format or compressed off campus weekend format), did not result in meaningful differences in the final course grades for the participating classes, therefore the null hypothesis was not rejected.

Table 9

Group Statistics

	On/off campus	N	Mean	Std. Deviation	Std. Error Mean
Final Grade	On campus	14	83.4	10.3	2.7
	Off campus	24	86.3	10.2	2.1

Table 10

Independent Samples Test

				Significance	95% Confidence Interval	
	Critical *t*	*t*	*df*	Two-Sided *p*	Lower	Upper
Final Grade	2.028	-.820	36	.417	-9.797	4.154

The first quantitative analysis directly compared the final scores for the course between the students enrolled in the traditional on-campus 16-week course schedule and those enrolled in the off-campus compressed course schedule. There was only a small variation in the final grades for the course between the two student groups. The descriptive statistics for the on-campus and off-campus students are provided in Table 13 and Table 15 respectively. The results indicate there was no significant statistical differences between the two groups.

Pearson's r was calculated for several of the variables in this research study for both course format student groups (Table 14 and Table 16). Regarding Pearson's r, zero indicates no correlation, -1 indicates a strong negative correlation, and 1 indicates a strong positive correlation between the two variables (Tabachnick & Fidell, 2018). To answer the three research questions, the researcher identified two variables that had a significant impact on student academic performance and provided the strongest correlation between variables. For on-campus students:

1. A strong correlation (Table 14) was found between the level of interest in the course material (M=3.5, SD=.85) and students' academic status (M=3.08, SD=.86); r (13) = .094, p = .033. This result indicates that there is a strong positive association between on-campus students' level of interest, Table 11, in the course material and their academic status, Table 12.

2. A moderate correlation (Table 14) was found between final grade (M=83.4, SD = 10.3) and level of interest (M=3.5, SD=.85); r (13) = .558, p = .094. This result indicates that there is a positive relationship between students' final course grade, and the level of interest for the students taking the course in the standard on-campus 16-week course format.

Table 11

Level of Interest Key

	1	2	3	4	5
Level of Interest	Low	Fair	Moderate	High	Very High

Table 12

Academic Status Key

	1	2	3	4
Academic Status	Freshman	Sophomore	Junior	Senior

Table 13

Descriptive Statistics – On-Campus Students

	N	Minimum	Maximum	Mean	Std. Deviation
Final Grade	14	59	94	83.43	10.26
GPA	13	1.8	4.0	3.38	.59
Average Quiz Grade	14	66	92	80.86	7.91
Number of English Classes	14	0	2	.93	.91
Number of Scholarships	14	0	5	.71	1.43
Credit Hours	14	12	18	14.50	1.87
Level of Interest	10	2	5	3.50	.85
Status	13	1	4	3.08	.86
Personal Brand	14	70	100	90.71	10.71
Cover Letter	14	0	100	74.64	24.76
Resume	14	40	100	81.93	14.70
Interview	14	0	100	85.71	36.31
Avg Discuss Post Grade	14	60	100	87.00	16.01

Table 14

Correlations – On-Campus Students

		Final Grade	GPA	Quiz Grades	Number of Engl. Classes	Credit Hours	Level of Interest	Personal Brand	Cover Letter	Resume	Interview	Number of Scholarships	Acad. Status
Final Grade	Pearson's *r*	1	.360	.528	-.266	-.489	.558	-.199	.627*	.314	.864	.442	.422
	Sig. (2-tailed)		.226	.052	.358	.076	.094	.496	.016	.275	<.001	.114	.151
	N	14	13	14	14	14	10	14	14	14	14	14	13
GPA	Pearson's *r*	.360	1	.758	-.445	-.277	.389	-.287	.129	.489	-.049	.425	.084
	Sig. (2-tailed)	.226		.003	.128	.360	.301	.342	.674	.090	.873	.148	.784
	N	13	13	13	13	13	9	13	13	13	13	13	13
Average Quiz Grades	Pearson's *r*	.528	.758	1	-.500	-.390	.510	-.343	.269	.289	.153	.571*	.148
	Sig. (2-tailed)	.052	.003		.069	.168	.132	.229	.353	.317	.602	.033	.630
	N	14	13	14	14	14	10	14	14	14	14	14	13
Number of English Classes	Pearson's *r*	-.266	-.445	-.500	1	.695	-.329	.006	.067	-.234	-.264	-.309	-.199
	Sig. (2-tailed)	.358	.128	.069		.006	.354	.985	.821	.420	.362	.283	.516
	N	14	13	14	14	14	10	14	14	14	14	14	13
Credit Hours	Pearson's *r*	-.489	-.277	-.390	.695	1	-.072	.134	-.245	.203	-.453	-.429	-.073
	Sig. (2-tailed)	.076	.360	.168	.006		.844	.647	.399	.487	.104	.126	.813
	N	14	13	14	14	14	10	14	14	14	14	14	13
Level of Interest	Pearson's *r*	.558	.389	.510	-.329	-.072	1	.115	.486	.128	.620	.291	.709*
	Sig. (2-tailed)	.094	.301	.132	.354	.844		.751	.154	.724	.056	.415	.033
	N	10	9	10	10	10	10	10	10	10	10	10	9
Personal Brand	Pearson's *r*	-.199	-.287	-.343	.006	.134	.115	1	-.477	.088	.028	.064	-.014
	Sig. (2-tailed)	.496	.342	.229	.985	.647	.751		.084	.764	.924	.827	.964
	N	14	13	14	14	14	10	14	14	14	14	14	13
Cover Letter	Pearson's *r*	.627*	.129	.269	.067	-.245	.486	-.477	1	-.228	.550*	-.003	.617*
	Sig. (2-tailed)	.016	.674	.353	.821	.399	.154	.084		.433	.042	.992	.025

	N	14	13	14	14	14	10	14	14	14	14	14	13
Resume	Pearson's *r*	.314	.489	.289	-.234	.203	.128	.088	-.228	1	.156	.108	.009
	Sig. (2-tailed)	.275	.090	.317	.420	.487	.724	.764	.433		.593	.713	.976
	N	14	13	14	14	14	10	14	14	14	14	14	13
Interview	Pearson's *r*	.864	-.049	.153	-.264	-.453	.620	.028	.550*	.156	1	.211	.554*
	Sig. (2-tailed)	<.001	.873	.602	.362	.104	.056	.924	.042	.593		.470	.049
	N	14	13	14	14	14	10	14	14	14	14	14	13
Number of Scholarships	Pearson's *r*	.442	.425	.571*	-.309	-.429	.291	.064	-.003	.108	.211	1	.015
	Sig. (2-tailed)	.114	.148	.033	.283	.126	.415	.827	.992	.713	.470		.961
	N	14	13	14	14	14	10	14	14	14	14	14	13
Academic Status	Pearson's *r*	.422	.084	.148	-.199	-.073	.709*	-.014	.617*	.009	.554*	.015	1
	Sig. (2-tailed)	.151	.784	.630	.516	.813	.033	.964	.025	.976	.049	.961	
	N	13	13	13	13	13	9	13	13	13	13	13	13

* Correlation is significant at the 0.05 level (2-tailed).

In addition, for the off-campus students, the researcher identified two variables that may have influenced student academic performance and provided the strongest correlation between variables:

1. A strong correlation (Table 16) was found between final grade (M=86.3, SD = 10.2) and GPA (M=3.56, SD=.31); r (13) = .723, p = < .001. This result indicates that there is a strong positive relationship between students' final course grades and GPAs for the students taking the course in the compressed off-campus course format.
2. A moderate correlation (Table 16) was found between the level of interest in the course material (M=3.52, SD = 1.2) and academic status (M=2.64, SD=1.03); r (13) = .542, p = .011. This result indicates that there is a moderate positive relationship between students' level of interest in the course material and the academic status of the students taking the course in the compressed off-campus course format.

Table 15

Descriptive Statistics – Off-Campus Students

	N	Minimum	Maximum	Mean	Std. Deviation
Final Grade	24	53	96	86.25	10.20
GPA	21	3.0	4.0	3.56	.313
Average Quiz Grade	25	62	96	83.00	8.71
Number of English Classes	24	0	2	1.17	.868
Number of Scholarships	25	0	1	.24	.436
Credit Hours	23	9	12	11.74	.864
Level of Interest	21	1	5	3.52	1.20
Status	25	1	4	2.64	1.03
Personal Brand	25	0	100	87.60	26.96
Cover Letter	25	0	100	81.80	20.25
Resume	25	0	100	82.64	20.11
Interview	25	0	100	92.00	27.68
Avg Discuss Post Grade	25	65	100	92.76	9.83

Table 16

Correlations – Off-Campus Students

		Final Grade	GPA	Total Quiz Grade	Number of Engl. Classes	Credit Hours	Level of Interest	Personal Brand	Cover Letter	Resume	Interview	Number of Scholarships	Acad Status
Final Grade	Pearson's *r*	1	.723	.634	-.226	-.107	.107	.469*	.544**	.769	.747	.018	.110
	Sig. (2-tailed)		<.001	<.001	.289	.636	.654	.021	.006	<.001	<.001	.934	.609
	N	24	21	24	24	22	20	24	24	24	24	24	24
GPA	Pearson's *r*	.723	1	.680	-.178	.331	-.141	.196	.530*	.528*	.414	.024	.597
	Sig. (2-tailed)	<.001		<.001	.439	.155	.575	.394	.013	.014	.062	.917	.004
	N	21	21	21	21	20	18	21	21	21	21	21	21
Total Quiz Grade	Pearson's *r*	.634	.680	1	-.312	.026	.142	-.046	.422*	.266	.259	.208	.161
	Sig. (2-tailed)	<.001	<.001		.137	.907	.540	.827	.035	.198	.211	.318	.441
	N	24	21	25	24	23	21	25	25	25	25	25	25
Number of English Classes	Pearson's *r*	-.226	-.178	-.312	1	-.311	-.093	.076	-.172	-.130	.059	-.221	-.024
	Sig. (2-tailed)	.289	.439	.137		.160	.695	.724	.421	.546	.784	.299	.912
	N	24	21	24	24	22	20	24	24	24	24	24	24
Credit Hours	Pearson's *r*	-.107	.331	.026	-.311	1	.536*	-.091	-.005	-.068	-.095	.183	.020
	Sig. (2-tailed)	.636	.155	.907	.160		.018	.681	.982	.758	.666	.402	.928
	N	22	20	23	22	23	19	23	23	23	23	23	23
Level of Interest	Pearson's *r*	.107	-.141	.142	-.093	.536*	1	-.005	.094	.030	-.131	.166	-.542*
	Sig. (2-tailed)	.654	.575	.540	.695	.018		.984	.684	.896	.572	.472	.011
	N	20	18	21	20	19	21	21	21	21	21	21	21
Personal Brand	Pearson's *r*	.469*	.196	-.046	.076	-.091	-.005	1	-.079	.587	.531	.086	.117
	Sig. (2-tailed)	.021	.394	.827	.724	.681	.984		.706	.002	.006	.681	.578
	N	24	21	25	24	23	21	25	25	25	25	25	25
Cover Letter	Pearson's *r*	.544	.530*	.422*	-.172	-.005	.094	-.079	1	.154	.175	.020	.022
	Sig. (2-tailed)	.006	.013	.035	.421	.982	.684	.706		.464	.402	.925	.916

	N	24	21	25	24	23	21	25	25	25	25	25	25
Resume	Pearson's *r*	.769	.528*	.266	-.130	-.068	.030	.587	.154	1	.660	.134	.107
	Sig. (2-tailed)	<.001	.014	.198	.546	.758	.896	.002	.464		<.001	.524	.609
	N	24	21	25	24	23	21	25	25	25	25	25	25
Interview	Pearson's *r*	.747	.414	.259	.059	-.095	-.131	.531	.175	.660	1	-.180	.186
	Sig. (2-tailed)	<.001	.062	.211	.784	.666	.572	.006	.402	<.001		.391	.374
	N	24	21	25	24	23	21	25	25	25	25	25	25
Number of Scholarships	Pearson's *r*	.018	.024	.208	-.221	.183	.166	.086	.020	.134	-.180	1	-.170
	Sig. (2-tailed)	.934	.917	.318	.299	.402	.472	.681	.925	.524	.391		.417
	N	24	21	25	24	23	21	25	25	25	25	25	25
Academic Status	Pearson's *r*	.110	.597	.161	-.024	.020	-.542*	.117	.022	.107	.186	-.170	1
	Sig. (2-tailed)	.609	.004	.441	.912	.928	.011	.578	.916	.609	.374	.417	
	N	24	21	25	24	23	21	25	25	25	25	25	25

* Correlation is significant at the 0.05 level (2-tailed).

Demographic Questions and Data – Student Pre-Course Survey

The first demographic question from the pre-course student survey (Q1) asked the students their gender. There was not enough diversity in gender, Table 17 and Table 18, to lead to any meaningful statistical analysis, so gender was removed from the correlation analysis.

Table 17

Gender – On Campus

	N	%
1	13	93
2	1	7

Table 18

Gender – Off-Campus

	N	%
1	18	72
2	5	20

Note. Two participants did not answer the question.

The second demographic question from the pre-course student survey (Q2) asked the students their birthdate. Both groups of students were homogenous regarding age. Most students were under 25 years old. Ninety-three percent of the off-campus students were under the age of 25, and 96% of the on-campus students were under the age of 25. There was not enough diversity in age, in either student group, to lead to any meaningful statistical analysis, so age was removed from the correlation analysis.

The third demographic question from the pre-course student survey (Q3) asked the students their ethnicity. There was not enough diversity in ethnicity, in either student group, to lead to any meaningful statistical analysis.

The fourth demographic question from the pre-course student survey (Q4) asked the students their academic status (Table 19 and Table 20).

Table 19

Academic Status – On-Campus

	N	%
1 – Freshman	1	7.1
2 – Sophomore	1	7.1
3 – Junior	7	50
4 – Senior	4	29.6

Note. One participant did not answer the question.

Table 20

Academic Status – Off-Campus

	N	%
1 – Freshman	5	20
2 – Sophomore	4	16
3 – Junior	11	44
4 - Senior	5	20

The fifth demographic question from the pre-course student survey (Q5) asked the students if they had ever served in the military. Specifically, students were asked how many years they served in the military, branch of service, job title, and rank at discharge. There was only one individual, out of the two groups of students, who had military experience. This did not provide sufficient representation within the sample population to make meaningful conclusions based upon the statistical analysis.

The sixth demographic question from the pre-course student survey (Q6) asked the students if they were an on-campus or off-campus student. The off-campus student group was comprised of 26 students, while the on-campus student group consisted of 14 students.

The seventh demographic question from the pre-course student survey (Q7) asked the students their projected graduation date. Some students were uncertain of their projected graduation date, so the academic status of the students was used to provide the data regarding the students' progress toward graduation.

The eighth demographic question from the pre-course student survey (Q8) asked the students how many Aviation Management core courses they had completed. This information was not included because the students could not accurately provide this information for the study.

The ninth demographic question from the pre-course student survey (Q9) asked the students the number of credit hours of coursework in which they were enrolled during the fall 2021 semester.

Table 21

Credit Hour Enrollment Fall 2021 – On-Campus

	N	%
12	3	21.4
14	4	28.6
15	5	35.7
18	2	14.3

Table 22

Credit Hour Enrollment Fall 2021 – Off-Campus

	N	%
9	2	8
12	21	84

Note. Two students did not answer the question.

There was a difference between the credit hour enrollment between the two student groups. Seventy-eight percent of the on-campus students (Table 21) were enrolled in more than 12 credit hours during the fall semester; however, none of the off-campus students (Table 22) were enrolled in more than 12 credit hours during the fall semester.

The tenth demographic question from the pre-course student survey (Q10) asked the students the number of college-level English courses, Table 23 and Table 24, they had completed within the past two years.

Table 23

Number of English Classes – On-Campus

	N	%
0	6	42.9
1	3	21.4
2	5	35.7

Table 24

Number of English Classes – Off-Campus

	N	%
0	7	28
1	6	24
2	11	44

Note. One student did not answer the question.

Sixty-eight percent of the compressed schedule off-campus students had completed one or two English classes within the last two years (Table 24) while 57.1% of the traditional schedule on-campus students (Table 23) completed one or two English classes within the last two years. However, there was no statistically significant correlation between the number of English classes students had completed within the last two years, and the grades earned on the writing-based assignments.

The eleventh demographic question from the pre-course student survey (Q11) asked the students the highest level of education they had completed. Students' highest level of education was similar. Nearly all the students listed their highest level of education completed as a high school diploma. There was not enough diversity, in either student group, to lead to any meaningful statistical analysis, so highest level of education was removed from the correlation analysis.

The twelfth demographic question from the pre-course student survey (Q12) asked the students their current GPA (Table 25 and Table 26).

Table 25

GPA – Off-Campus

	N	%
3.0	3	12
3.2	2	8
3.5	3	12
3.6	1	4
3.7	7	28
3.8	2	8
3.9	1	4
4.0	2	8

Note. Four participants did not answer the question.

Table 26

GPA – On-Campus

	N	%
1.8	1	7.1
2.9	1	7.1
3.1	1	7.1
3.3	3	21.4
3.5	3	21.4
3.9	2	14.3
4.0	2	14.3

Note. One student did not answer the question.

The final demographic question from the pre-course student survey (Q13) asked the students if they had been awarded any academic scholarships within the past five years (Table 27 and Table 28).

Table 27

Number of Scholarships - On-Campus

	N	%
0	10	71.4
1	1	7.1
2	2	14.3
5	1	7.1

Table 28

Number of Scholarships - Off-Campus

	N	%
0	19	76
1	6	24

Open-Ended Questions – Student Pre-Course Survey

In addition to the demographic questions, this research study was designed to collect informative qualitative data using open-ended questions in the pre-course survey. The open-ended questions sought information that would provide the researcher with the level of interest the students had in the course, and if the students believed the course would help achieve their career goals. Next, the questions sought information encompassing the reasons and motivation to complete a college degree. The final questions of the pre-course survey focused on the students' career goals in the aviation industry, as well as the students' interest in pursuing a graduate degree in the future.

The researcher manually coded and compared all the students' responses from the pre- and post-course surveys to identify commonality among responses. Next, the researcher clustered all the students' responses into common themes (Creswell & Creswell, 2018). The students' responses to each question were put into a corresponding research question response table (Tables 29-57) (Chapter 4) and the common themes for each survey question were included after each table. From the data collected and analysis of the data, conclusions and recommendations were identified (Chapter 5).

Student Responses – Pre-Course Survey Question 14

The first open-ended question (Table 29 and Table 30) in the pre-course student survey (Q14) sought to determine the students' level of interest in aviation industry career development.

Table 29

Level of Interest - On-Campus

Student Identifier	On-Campus Student Response
Student 1	Moderate to high.
Student 3	No response
Student 4	High interest, want to learn more.
Student 5	Very interested. I want to learn how to better present myself to the professional aviation industry.
Student 6	70%
Student 7	Airline pilot or airline business administration
Student 10	I have a good interest in this career development because I think it will have an impact on future decisions I make.
Student 13	I want to become a commercial airline pilot.
Student 14	10/10. Very high
Student 16	Moderate – high. I enjoy career development and discussing and improving professional skills.
Student 17	Fair
Student 18	I have an interest in shaping my career.
Student 19	I am definitely interested because I think this class will be useful.

Common themes that emerged from both on-campus and off-campus student responses to Q14: (1) the majority of students had a moderate to high level of interest in aviation career development, and (2) the students recognized the connection between the information provided in the course and the probability of developing a successful career in the aviation industry.

Table 30

Level of Interest - Off-Campus

Student Identifier	Off-Campus Student Response
Student 1	High
Student 3	Not very interested.
Student 4	I am highly interested in this class
Student 5	A lot. Will be used in my near future.
Student 7	High
Student 12	Required class.
Student 16	Very high.
Student 20	My interest was low because I did not know much about. After the first day of class however, I am excited.
Student 21	High.
Student 22	Further my career to become a pro pilot.
Student 24	Very very interested.
Student 31	High.
Student 40	Pretty high, it is important for my career.
Student 44	High.
Student 45	Pretty interested.
Student 48	A lot, want to decide whether to go airlines or private pilot.
Student 55(a)	Pilot. 9 out of 10
Student 55(b)	The class doesn't interest me much, but I know it will be essential for any future career goals.
Student 65	Very interested.
Student 69	I enjoy the class.
Student 72	Medium
Student 79	Moderate
Student 87	I have the highest level of interest since I want to successfully secure a job as a commercial pilot.
Student 92	Aviation is my passion.
Student 99	High.

Note. The 55(a) and 55(b) anonymized student identifier was given to two off-campus students to avoid duplication. Students were allowed to choose their own identifier number.

Student Responses – Pre-Course Survey Question 15

The second open-ended question in the pre-course survey (Q15) asked the students in this course will be useful in their career (Table 31 and Table 32).

Table 31

Course Will be Useful - On-Campus

Student Identifier	On-Campus Student Response
Student 1	Yes, to prepare for employment at airline.
Student 3	Yes, it's going to increase my knowledge in my major.
Student 4	Yes very, help resume, interview and job app prep.
Student 5	Yes, because it will help me be able to present myself better.
Student 6	Yes, because it will prepare me for what is after university.
Student 7	Yes, it will provide job search skills and tactfulness.
Student 10	Yes, to manage and provide assistance for learning how to make a career.
Student 13	Yes, it will help me understand all the different career paths in the aviation industry
Student 14	Yes, I would like to work for an airline or the FAA.
Student 16	Yes, I will present myself more professionally and learn to appear more desirable to employers.
Student 17	This course is useful to me because it provides the opportunity to compete.
Student 18	Yes, as it will provide me with the skills necessary to succeed in my career.
Student 19	Yes, because it will help me be prepared for being in a work setting.

Prevailing topics that emerged from both on-campus and off-campus student responses to Q15: (1) the students valued the information provided in the course, and (2) recognized the importance of the information to the pursuit of their careers in the aviation industry.

Table 32

Course Will be Useful - Off-Campus

Student Identifier	Off-Campus Student Response
Student 1	Yes, because it will teach me important info that will help me get a job
Student 3	Yes, making resumes and interviewing for jobs.
Student 4	Yes, because it will help me become competitive when seeking a future pilot position.
Student 5	Yes, job hiring in the future.
Student 7	Yes, I will learn how to properly interview.
Student 12	Yes, seems to help prepare you for job/hiring processes and professionalism.

Student 16	Yes, for being more professional.
Student 20	Yes, you learn about how to network and interview. Also helps learning about cover letters/resume. We learned a lot for flying and training in the airplane but haven't learned how to use certain skills during an interview and techniques on how to get hired.
Student 21	This is one of the only courses that prepares you for after graduation. YES.
Student 22	Yes, networking, resume, etc.
Student 24	Yes, it will help me turn hiring strategies into useful tools.
Student 31	Yes. It is incredibly useful to know what future employers will be seeking out during the hiring process.
Student 40	Yes, it is an essential class to assist in the interview process.
Student 44	Yes, building a resume
Student 45	Yes, good info to know.
Student 48	Yes, will help get me a job.
Student 55(a)	Yes, shows opportunity aviation careers.
Student 55(b)	Yes, it will prepare me to be a professional in the aviation industry. It will help fine tune my writing skills and build confidence for potential interviews.
Student 65	This course would be very useful. It will help me sculpt my resume and work on my networking and interviewing skills.
Student 69	Yes, it will help prepare me for my career.
Student 72	Yes.
Student 79	Yes.
Student 87	Yes, this will help my interview process.
Student 92	Yes, it will help me in the hiring process.
Student 99	Yes, prepares for the future.

Note. The 55(a) and 55(b) anonymized student identifier was given to two off-campus students to avoid duplication. Students were allowed to choose their own identifier number.

Student Responses – Pre-Course Survey Question 16

The third open-ended question in the pre-course student survey (Q16) was asked to determine why the students are pursuing an undergraduate degree (Table 33 and Table 34).

Table 33

Pursuing Undergraduate Degree - On-Campus

Student Identifier	On-Campus Student Response
Student 1	The love of aviation and interest in management.
Student 3	Because I like Aviation World.
Student 4	To become a professional pilot with a bachelor's degree
Student 5	I want to become an airline pilot and the degree reduces the amount of hours to get there.
Student 6	So I can continue master's degree.

Student 7	To make me a better candidate for airline employment.
Student 10	If aviation flight somehow isn't the first option in the future.
Student 13	Without this degree I cannot become an airline pilot.
Student 14	Resume builder and the base of my new career in aviation.
Student 16	To satisfy the 1,000 hour reduction for the pt 141 program and have a degree to fall back on.
Student 17	I would like to become a airline pilot with a degree.
Student 18	Because of the potential for career longevity.
Student 19	Because I like flying planes.

Prevalent points that emerged from on-campus student responses to Q16: (1) the majority of students indicated that they were pursuing an undergraduate degree as a requirement to begin their career in aviation, specifically as an airline pilot, and (2) other students cited their passion for aviation. The prevalent point that emerged from off-campus student responses to Q16 indicated the students were pursuing an undergraduate degree as a requirement to begin a career in aviation, specifically as an airline pilot.

Table 34

Pursuing Undergraduate Degree - Off-Campus

Student Identifier	Off-Campus Student Response
Student 1	To further my career in aviation
Student 3	It is a cheap and fast way to get a four-year degree
Student 4	To make myself more marketable.
Student 5	To get a leg up on hiring.
Student 7	To get to the airlines.
Student 12	R-ATP and to have a bachelor's degree.
Student 16	R-ATP
Student 20	The airlines like to see that you completed it so that's the main reason I am doing it. It's also a back up plan in case I lose my medical.
Student 21	I need it to do what I want with my career.
Student 22	Pilot
Student 24	So I can enter the airlines with less hours.
Student 31	To become a more appealing candidate for hire.
Student 40	To open possibilities within the industry.
Student 44	To go into officer school.
Student 45	Professional pilot.
Student 48	So I can get a job in the airlines.
Student 55(a)	To graduate.

Student 55(b)	To obtain a 4-year degree in aviation.
Student 65	An undergraduate degree will help me be more competitive for the airlines I would like to work for.
Student 69	It is cheap and Delta wants it.
Student 72	To satisfy 4 year degree requirement for airlines.
Student 79	I need it for the airlines.
Student 87	To become a professional pilot and receive the R-ATP.
Student 92	To have a back up in case I can no longer be a pilot.
Student 99	Needed for major airlines.

Note. The 55(a) and 55(b) anonymized student identifier was given to two off-campus students to avoid duplication. Students were allowed to choose their own identifier number.

Student Responses – Pre-Course Survey Question 17

The fourth open-ended question in the pre-course student survey (Q17) asked the students to state the most important benefit of a college education (Table 35 and Table 36).

Table 35

Benefit of a College Education - On-Campus

Student Identifier	On-Campus Student Response
Student 1	Help grow my portfolio and to acquire college degree for employment.
Student 3	No response.
Student 4	Aviation career preparedness, pilot certificates and pathways.
Student 5	It help me learn more about the career/industry I am going into.
Student 6	The learning experience.
Student 7	Knowledge and skills.
Student 10	To get a degree and be able to achieve my goals through SIU.
Student 13	The ability to show that I can see something all the way through and finish what I started.
Student 14	Real life application of material.
Student 16	It offers a necessary competitive edge when seeking employment.
Student 17	Quality education and opportunities.
Student 18	Holding a college degree, namely a Bachelor's.
Student 19	It takes required hours off of R-ATP.

Common information that emerged from the on-campus and off-campus student responses to Q17: (1) pursue a career, (2) acquire knowledge and the satisfaction of accomplishing the goal of earning a bachelor's degree, and (3) a college degree is unimportant, yet necessary.

Table 36

Benefit of a College Education - Off-Campus

Student Identifier	Off-Campus Student Response
Student 1	To be more likely to get my dream job and do it effectively.
Student 3	It is a way to get higher level jobs, but overall, not very important.
Student 4	Make myself more marketable and allow for a back up if my flying career does not work out.
Student 5	To make a career for myself.
Student 7	I can get a better job.
Student 12	Cost-efficiency, time, value, and flexibility.
Student 16	Learning.
Student 20	Being able to hand someone a piece of paper in a job interview that says you have one.
Student 21	Allows you to mature and develop so you are ready to act as a professional in whatever career.
Student 22	Helps me grow academically and as an individual.
Student 24	Taking college courses will benefit me by providing me with tools to use for my future career.
Student 31	Future employment. More realistically, however, it will probably just be a bragging rights/pride thing after a certain part of career progression.
Student 40	To prove I can complete what I start.
Student 44	Acquiring more education.
Student 45	A career.
Student 48	Learning information.
Student 55(a)	R-ATP
Student 55(b)	Getting the education that will prepare me for an aviation career.
Student 65	More competitive, more knowledge.
Student 69	I don't know yet.
Student 72	Knowledge.
Student 79	Getting it done.
Student 87	The R-ATP hour deduction.
Student 92	The degree.
Student 99	Allows me to pursue ideal job.

Note. The 55(a) and 55(b) anonymized student identifier was given to two off-campus students to avoid duplication. Students were allowed to choose their own identifier number.

Student Responses – Pre-Course Survey Question 18

The fifth open-ended question in the pre-course student survey (Q18) sought to understand the students' level of motivation to complete a college degree (Table 37 and Table 38).

Table 37

Motivation to Complete Degree - On-Campus

Student Identifier	On-Campus Student Response
Student 1	Moderate to high. To add the degree to my resume and portfolio.
Student 3	I'd like to complete my college degree and then find job to make money and depend on myself.
Student 4	Very, to excel in my career and obtain a job that suits me after I graduate.
Student 5	I am very motivated because I am ready to be done with school full time.
Student 6	I'm very motivated because I will become a pilot.
Student 7	Extremely motivated. To begin a career and start my own family.
Student 10	I'm very motivated because the faster I finish the faster I can get to the airlines.
Student 13	Very motivated, without a degree it will be difficult to find a living.
Student 14	10/10. I left the military for a reason. I like aviation and want to continue this career path.
Student 16	Very. College is the only option that has been presented to me while growing up. It feels like a necessary step that I don't have a choice in completing. (I still want to; this isn't forced)
Student 17	Extremely, I am excited to do so but also cannot afford to fail.
Student 18	Highly motivated, as this is one of the greatest steps toward building my future.
Student 19	Moderately motivated but it is getting harder the more money I put into it.

Table 38

Motivation to Complete Degree - Off-Campus

Student Identifier	Off-Campus Student Response
Student 1	Very because I want to pursue my career.
Student 3	I'm somewhat motivated, it is not very hard, so a lot of time doesn't have to be taken up.
Student 4	Highly motivated. If I fail a class, I have to wait a year, which will keep me from a regional job.
Student 5	Very. Money and effort invested.
Student 7	Very. So I can get a job.
Student 12	Very. To get my job and career started ASAP.

Student 16	To succeed in life.
Student 20	I always wanted to fly for the airlines. This is another thing I have to do to achieve that goal so I am highly motivated.
Student 21	Highly. This is my last class.
Student 22	Very motivated. Would like to get airline job to support my family.
Student 24	I am motivated so I can focus on flying.
Student 31	Highly motivated. This is my last class. If I quit now it would only be excusable if I'd become brain dead.
Student 40	Very. Ready to move on.
Student 44	Very motivated. Want to start earning money.
Student 45	Very motivated. I want a career.
Student 48	Pretty motivated but do get distracted easily.
Student 55(a)	Motivated to get aviation-based degree.
Student 55(b)	Pretty motivated. Excited to start pursuing a career.
Student 65	Very motivated.
Student 69	Motivated to finish school.
Student 72	Somewhat.
Student 79	Very because I need it.
Student 87	Very motivated. A bachelor's degree is necessary to secure a good job.
Student 92	Motivated. I've already put a lot of money into it.
Student 99	High, ready to get to the workforce.

Note. The 55(a) and 55(b) anonymized student identifier was given to two off-campus students to avoid duplication. Students were allowed to choose their own identifier number.

The common theme from both on-campus and off-campus students (Q18) was a high level of motivation to complete a college degree existed because the students were eager to begin their career in the aviation industry.

Student Responses – Pre-Course Survey Question 19

The purpose of the sixth open-ended question in the pre-course student survey (Q19) was to identify the students who planned to pursue a career in the aviation industry (Table 39 and Table 40).

Q19: Do you intend to pursue a career in the aviation industry? If so, what career opportunities within the aviation industry do you intend to pursue?

Table 39

Pursue Career in Aviation Industry - On-Campus

Student Identifier	On-Campus Student Response
Student 1	Yes, becoming a pilot.
Student 3	No response.
Student 4	Yes, pilot – either commercial, corporate, cargo, military.
Student 5	I plan on being an airline pilot.
Student 6	Pilot
Student 7	Pilot, manager, administrator, entrepreneur.
Student 10	Aviation flight, ATC.
Student 13	Become an airline pilot.
Student 14	Safety investigator.
Student 16	Yes, piloting is my goal and I'd like to fly for an airline. Other positions in flight operation excite me as well.
Student 17	Airline pilot.
Student 18	I intend to become a freight carrier pilot.
Student 19	Flying for an airline/cargo.

Table 40

Pursue Career in Aviation Industry - Off-Campus

Student Identifier	Off-Campus Student Response
Student 1	Cargo pilot.
Student 3	Yes, pilot for regionals and then major airlines.
Student 4	Yes, intend to pursue a pilot position.
Student 5	Yes, as a pilot.
Student 7	Yes, pilot slots at any legacy carrier.
Student 12	Pilot/Airline or cargo.
Student 16	Yes, corporate pilot.
Student 20	I do not intend to but would be open minded if I can't fly.
Student 21	Part 135 pilot. Part 121 pilot.
Student 22	Pilot
Student 24	Yes, I intend to be a pilot.
Student 31	Yes. I'm kind of interested in perhaps pursuing the operations side of things eventually but it would have to be very lucrative financially for me to give up being a pilot.
Student 40	Commercial aviation. I'd like to make it to Delta.
Student 44	To be an airline pilot.
Student 45	Pilot.
Student 48	Yes, fly planes.
Student 55(a)	Pilot.
Student 55(b)	Professional pilot or airport planning.

Student 65	I would like to work for a legacy airline.
Student 69	Airlines
Student 72	Yes. Cargo or airline pilot.
Student 79	Yes, a pilot job at the airlines.
Student 87	Commercial airline pilot, cargo pilot, or corporate pilot.
Student 92	Yes, I'm thinking air cargo.
Student 99	Yes, flight instruction and first officer positions.

The prevailing theme from both on-campus and off-campus students (Q19) was that the majority of students intended to pursue a career as a pilot.

Student Responses – Pre-Course Survey Question 20

The seventh open-ended question in the pre-course student survey (Q20) identified students who are currently employed in the aviation industry (Table 41 and Table 42).

Table 41

Employed in Aviation Industry - On-Campus

Student Identifier	On-Campus Student Response
Student 1	At SIU. 1 year. SIU Flight Operations Dispatcher
Student 3	No
Student 4	Capital Flight. 3 years. Shop assistant
Student 5	No
Student 6	No
Student 7	No
Student 10	No
Student 13	No response.
Student 14	No.
Student 16	No response.
Student 17	No response.
Student 18	No
Student 19	No

Table 42

Employed in Aviation Industry - Off-Campus

Student Identifier	Off-Campus Student Response
Student 1	No.
Student 3	No.
Student 4	Boutique Air. 1 year. Customer service agent
Student 5	No.
Student 7	No.
Student 12	No
Student 16	Moore Aviation. 2 years. Line service
Student 20	No response.
Student 21	Southern Airways Express. 1 year. Cross-utilized agent
Student 22	No.
Student 24	Ravotti Air. 1 year. Flight support, dispatch, and line service.
Student 31	No.
Student 40	No response.
Student 44	IDS. 2 years. De-icer
Student 45	Southern Airways Express. 1 year. Customer service/ramp agent
Student 48	FBO. 8 months. Line service.
Student 55(a)	PIT International. 1 year. Customer service rep.
Student 55(b)	No.
Student 65	Integrated Deicing Services. 5 months. Aircraft deicer.
Student 69	Moore Aviation. 2 years. Line service/dispatch
Student 72	Ravotti Air. 6 months. CFI
Student 79	No response.
Student 87	Ravotti Air. 2 years. Line service technician.
Student 92	Boutique Air. Just hired. Ramp agent.
Student 99	Latrobe, PA. 2 months. Part time pilot - Part 91

Note. The 55(a) and 55(b) anonymized student identifier was given to two off-campus students to avoid duplication. Students were allowed to choose their own identifier number.

Regarding Q20, only two on-campus students had previous aviation-related work experience, whereas approximately 50% of the off-campus students had previous aviation-related work experience.

Student Responses – Pre-Course Survey Question 21

The goal of the eighth open-ended question in the pre-course student survey (Q21) was to identify specific career and professional goals of the students (Table 43 and Table 44).

Table 43

Career Goals - On-Campus

Student Identifier	On-Campus Student Response
Student 1	To become improved self and gain knowledge unknown to others.
Student 3	Pilot Saudi Airline
Student 4	Pilot
Student 5	To make it to the airlines as quickly as possible.
Student 6	To become B-747 Captain
Student 7	Airline Captain
Student 10	Major airline pilot
Student 13	To become a commercial airline pilot.
Student 14	Safety investigator for the FAA. Complete my master's degree.
Student 16	To travel the world as an airline pilot and provide financial stability for my family and me.
Student 17	Benefit from different types of flight and jobs. In the end become an airline pilot.
Student 18	To become a long-haul commercial pilot for a freight carrier.
Student 19	To make my money, earn enough money possibly to live off of.

Table 44

Career Goals - Off-Campus

Student Identifier	Off-Campus Student Response
Student 1	Cargo pilot.
Student 3	Captain for a major carrier or cargo.
Student 4	Captain along with a chief position with a cargo company (UPS or FedEx).
Student 5	Make a career with airlines.
Student 7	Become a chief pilot at a legacy carrier.
Student 12	Airline pilot or cargo then retire and then be a check airman or aviation pilot professor.
Student 16	Be successful.
Student 20	Get a job with the airlines, work my way up to Captain and then see what my options are to advance my career.
Student 21	Fly for FedEx
Student 22	Captain/Check airman
Student 24	To work up to Captain.

Student 31	For right now, I just wanna make it to the left seat of one of the big boys.
Student 40	Make it to the left seat of a jet.
Student 44	Fly for the airlines.
Student 45	Cargo or corporate pilot.
Student 48	Fly something other than a C-172.
Student 55(a)	Pilot.
Student 55(b)	I mainly want to establish myself in a position that I can work for a long time. I like company loyalty, so finding a stable job is a big goal of mine.
Student 65	I would like to be a pilot for a legacy airline.
Student 69	Become a CFII and move to the airlines.
Student 72	FedEx Pilot
Student 79	Become a Captain.
Student 87	To fly a Boeing 747 or 777 and become a senior captain at one of the big 3.
Student 92	To become a professional pilot.
Student 99	Any major airline.

Note. The 55(a) and 55(b) anonymized student identifier was given to two off-campus students to avoid duplication. Students were allowed to choose their own identifier number.

The prevalent response from Q21 was that both student groups planned to pursue careers as commercial pilots.

Student Responses – Pre-Course Survey Question 22

The final open-ended question in the pre-course survey (Q22) asked students if they planned to pursue a graduate degree (Table 45 and Table 46).

Table 45

Pursue Graduate Degree - On-Campus

Student Identifier	On-Campus Student Response
Student 1	Master's and Doctoral degrees.
Student 3	I don't think so.
Student 4	No
Student 5	No
Student 6	Master's degree. Aviation Management
Student 7	No
Student 10	No response.
Student 13	No response.
Student 14	Master's degree. Business.
Student 16	No response.
Student 17	No response.
Student 18	Currently, no.

Student 19	No

Table 46

Pursue Graduate Degree - Off-Campus

Student Identifier	Off-Campus Student Response
Student 1	No.
Student 3	No.
Student 4	No.
Student 5	Master's degree. Does not know field of study.
Student 7	No.
Student 12	No.
Student 16	Master's degree. Airport Planning.
Student 20	No response.
Student 21	Master's degree. Aerospace
Student 22	Maybe.
Student 24	No.
Student 31	Absolutely not. I've written enough papers, thank you very much.
Student 40	No and no!
Student 44	No response.
Student 45	No.
Student 48	No response.
Student 55(a)	No response.
Student 55(b)	Probably. Business
Student 65	No response.
Student 69	No.
Student 72	No.
Student 79	No response.
Student 87	No.
Student 92	No.
Student 99	No.

Note. The 55(a) and 55(b) anonymized student identifier was given to two off-campus students to avoid duplication. Students were allowed to choose their own identifier number.

The responses for Q22 indicate the majority of on-campus and off-campus students did not have current plans to pursue a graduate degree.

Demographic Questions and Data – Student Post-Course Survey

The purpose of the post-course survey was to collect student information that would provide the researcher with the students' opinions regarding the educational value of the course.

The researcher used a five-point Likert Scale (Table 47) and open-ended questions (Table 48) in the post-course student survey. The five-point Likert-scale was assigned numerical values: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, and (5) Strongly Agree.

Table 47

Student Post-Course Survey – Likert Scale

Likert Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
S1: **This class was a good way to learn about aviation industry career development.**					
On-Campus Students				2 (14%)	12 (86%)
Off-Campus Students	1 (4%)		2 (8%)	5 (20%)	16 (64%)
S2: **This class had a positive effect on my interest in aviation industry career development.**					
On-Campus Students			1 (7%)	3 (21%)	10 (72%)
Off-Campus Students	1 (4%)	1 (4%)	2 (8%)	7 (28%)	13 (52%)
S3: I was able to ask questions in this class and get helpful responses.					
On-Campus Students				4 (28%)	10 (72%)
Off-Campus Students	1 (4%)			10 (40%)	13 (52%)
S4: Class discussions were encouraged.					
On-Campus Students				6 (43%)	8 (57%)
Off-Campus Students	1 (4%)		4 (16%)	7 (28%)	12 (48%)
S5: I was able to analyze and discuss course materials in class.					
On-Campus Students			1 (7%)	3 (21%)	10 (72%)
Off-Campus Students	1 (4%)		3 (12%)	11 (44%)	9 (36%)
S6: **In-class activities encouraged critical thinking.**					
On-Campus Students				3 (21%)	11 (79%)
Off-Campus Students	1 (4%)	1 (4%)	2 (8%)	7 (28%)	13 (52%)
S7: **I would recommend this class to other students.**					
On-Campus Students			1 (7%)	1 (7%)	12 (86%)
Off-Campus Students	1 (4%)	1 (4%)	2 (8%)	5 (20%)	15 (60%)
S8: **This course provided me with a good understanding of the skills and strategies for career development.**					
On-Campus Students				2 (14%)	12 (86%)
Off-Campus Students	1 (4%)		1 (4%)	6 (24%)	16 (64%)
S9: This class will assist me as I pursue my career objectives.					
On-Campus Students				3 (21%)	11 (79%)
Off-Campus Students	1 (4%)		2 (8%)	7 (28%)	14 (56%)
S10: **This class was interesting.**					
On-Campus Students			2 (14%)	8 (57%)	4 (29%)
Off-Campus Students	1 (4%)	2 (8%)	5 (20%)	10 (40%)	6 (24%)

Note. One off-campus student did not answer the Likert statements.

The student responses to S1 indicated that all of the on-campus students agreed or strongly agreed and 84% of the off-campus students agreed or strongly agreed that the course

was a good way to learn about aviation industry career development. Regarding S2, 93% of on-campus students agreed or strongly agreed and 80% of the off-campus students agreed or strongly agreed the course had a positive effect on student interest in aviation industry career development. The student responses to S3 showed that 100% of the on-campus students agreed or strongly agreed and (2) 92% of the off-campus students agreed or strongly agreed that students were able to ask questions in the class and receive helpful responses. All of the on-campus students agreed or strongly agreed and 76% of the off-campus students agreed or strongly agreed that class discussions were encouraged by the instructor (S4). The student responses to S5 indicated that 93% of the on-campus students agreed or strongly agreed and 80% of the off-campus students agreed or strongly agreed that students were able to analyze and discuss course materials in class. Similarly, student responses to S6 showed that all of the on-campus students agreed or strongly agreed and 80% of the off-campus students agreed or strongly agreed that the in-class activities encouraged critical thinking.

The majority (93%) of the on-campus students agreed or strongly agreed and 76% of the off-campus students agreed or strongly agreed with S7 that they would recommend this course to other students.

The student responses to S8 indicated that 100% of the on-campus students agreed or strongly agreed and 88% of the off-campus students agreed or strongly agreed the course provided them with a good understanding of the skills and strategies for career development.

All of the on-campus students (100%) agreed or strongly agreed and 84% of the off-campus students agreed or strongly agreed the course will assist them as they pursue their career objectives (S9).

Last, the student responses to S10 showed that 85.7% of the on-campus students agreed or strongly agreed and 64% of the off-campus students agreed or strongly agreed the course was interesting.

Open-Ended Questions

This research was designed to collect qualitative data using open-ended questions in the post-course survey. Open-ended questions offer qualitative data that provides a deeper understanding of the quantitative data. The qualitative data allowed the researcher to identify latent patterns that provide accurate answers to the research questions. The open-ended questions sought information that informed the researcher about student perception of the value and difficulty of the course. The first two questions of the post-course survey requested the students give their opinions regarding the aspects of the course. Questions three, four and five asked the students to give their opinions with respect to difficulty of the course and to indicate whether the course schedule affected the level of difficulty. Finally, students were asked if the course was an overall good learning experience.

Student Responses – Post-Course Survey Questions 1 and 2

The student responses to Q1: What are some of the best aspects of the course? and Q2: What are some of the weak aspects of the course? are provided in Tables 48 - 51.

Table 48

Best Aspects of the Course - On-Campus

Student Identifier	On-Campus Student Response
Student 1	Overall focused on aviation aspect was much help for me in future.
Student 3	It's helpful course which helps me to improve my skills.
Student 4	Portfolio building, business cards, and elevator speech.
Student 5	It helped me project myself in a more professional way.
Student 6	The interview assignment.
Student 7	The traditional schedule worked well for me and I was impressed with how well we maintained a schedule.

Student 8	The best aspects of the course was the level of depth and the topics discussed. Ex. We went over cover letters and the multiple types of job searches.
Student 10	The discussions about the industry were interesting and kept me engaged.
Student 13	The way the information was presented, it was easy to understand and straight to the point.
Student 14	Clear skill applicable to all jobs.
Student 16	Learning step-by-step how to complete important career tools such as resumes, cover letters and interviews.
Student 17	The depth the class went into helped to better understand the real-world process.
Student 18	The curriculum was easy to follow.
Student 19	Learning things normal classes don't teach you like interviewing, preparing for the workforce, and finding jobs.

Table 49

Best Aspects of the Course - Off-Campus

Student Identifier	Off-Campus Student Response
Student 1	Class atmosphere.
Student 3	Physically having to do an interview with real professionals.
Student 4	The understanding of professionalism.
Student 7	Mock interview.
Student 12	Development of job and interview process and materials.
Student 16	Resume writing.
Student 20	Resume, mock interview, and cover letter
Student 21	Learning how to make professional resumes/cover letters. The mock interview is very helpful. The cognitive tests are fun.
Student 22	Having an assignment that can be used at the end of the course to help in the real world.
Student 24	The best aspects were the helpfulness and the information.
Student 31	How valuable it is. This is the first time I've even heard of a collegiate program requiring a class with tips on landing a job and feel like all colleges should make it a requirement instead of the less valuable courses for a career (gen eds. sociology, arts)
Student 40	Mock interview, good experience.
Student 44	This class was a real-world class.
Student 45	Providing information on how to get a career.
Student 48	Learning about the interview process.
Student 55(a)	Resume review.
Student 55(b)	The mock interview and interview prep techniques were the most helpful aspects of the class. Additionally, resume and cover letter creation was very important information.
Student 65	Preparing myself for future job interviews and applications.
Student 69	The assignment prepared us to make actual resume and cover letters.

Student 72	One of the most useful classes I've taken with respect to furthering my career.
Student 79	Creating a cover letter and resume.
Student 87	The mock interview prep, and the professionalism of the professor.
Student 92	Learning cover letter and resume.
Student 99	Interview prep.

Note. The 55(a) and 55(b) anonymized student identifier was given to two off-campus students to avoid duplication. Students were allowed to choose their own identifier number.

Two prevailing topics emerged from both student group responses to Q1: (1) the course contributed to students' ability to pursue a career in the aviation industry, and (2) the presentation of course content and the discussions about industry topics.

Table 50

Weak Aspects of the Course - On-Campus Student Responses

Student Identifier	On-Campus Response
Student 1	No response.
Student 3	There was not any weakness.
Student 4	That it is only once a week.
Student 5	Not having access to the slides because there were times where I wanted to look back at them to improve my work.
Student 6	Repetitive information.
Student 7	None.
Student 8	I don't have any I can see.
Student 10	Some of the material felt repetitive.
Student 13	I would have liked for more guest speakers.
Student 14	A lot of info I knew before taking class.
Student 16	Besides Mrs. Miller bringing the discussion towards aviation, the course itself was not very aviation specific.
Student 17	It can get repetitive.
Student 18	The due dates for some assignment.
Student 19	None that I felt.

Table 51

Weak Aspects of the Course - Off-Campus Student Responses

Student Identifier	Off-Campus Student Response
Student 1	Availability of content outside of class.
Student 3	Missing any classes hurts the student with not much support.
Student 4	The description of assignments.
Student 7	Difficult schedule, interfered with lots of personal events.

Student 12	Mock interview is the only downside as a lot of students use Career Development Center and it's hard to schedule.
Student 16	Lots of busy work.
Student 20	No response.
Student 21	None.
Student 22	Some lectures felt a bit off topic and unnecessary. Quiz review could have been a bit more comprehensive.
Student 24	I do not like the long hours with 1 lunch.
Student 31	I needed a book for it. I feel like this is one of the 3 classes in my entire tenure at SIU that required a book and it's a petty easy…Having all of the information on D2L would have saved the students money and left everyone more prepared. Just seems like kind of a waste to rent a book for $76 that I only opened twice.
Student 40	Lack of in class work.
Student 44	No weak aspects.
Student 45	Testing format.
Student 48	Going too fast on the PowerPoint.
Student 55(a)	Not interesting, very boring. Extended amount of time talking.
Student 55(b)	I personally don't think the textbook is worth the money. I feel like I gained the most valuable information during class and watching guest speakers.
Student 65	Keeping up with assignment due dates on D2L. Not being able to ask in person questions due to 2 weeks away.
Student 69	None.
Student 72	I can't think of anything that was lacking.
Student 79	I feel that the cover letter could have been touched on a little more.
Student 87	I found all aspects of the course, assignments, lectures, discussions, and Kahoots all good aspects. Maybe incorporate Kahoot more because lectures in this subject matter can drag on.
Student 92	Quizzes.
Student 99	Would like more real-world pilots to come in and explain their career path.

Note. The 55(a) and 55(b) anonymized student identifier was given to two off-campus students to avoid duplication. Students were allowed to choose their own identifier number.

Common issues that emerged from both student group responses to Q2: (1) dissatisfaction with the course schedule, (2) lack of access to the lecture slides outside of the classroom, (3) lack of guest speakers, (4) repetition of course content, and (5) cost and use of textbook.

Student Responses – Post-Course Survey Questions 3

The third open-ended question in the post-course student survey (Q3) asked if the students thought the course was easy or difficult. The responses to Q3 are provided in Table 52 and Table 53.

Table 52

Difficulty of Course - On-Campus Student Responses

Student Identifier	On-Campus Student Response
Student 1	Moderate. As grammar errors are more criticized as to simulate real environment.
Student 3	It was very easy!
Student 4	Normal
Student 5	It was in the middle because the concept was easy but required a lot of thinking to get what was required.
Student 6	Easy.
Student 7	For me, the course was challenging but easy to grow and develop.
Student 8	While this is a loaded question, from a workload point of view, I would say it is easy in comparison to other AVM courses.
Student 10	It was a normal course, not too much work that it would be stressful.
Student 13	The course was easy, everything was easy to do but still allowed for the information to be understood.
Student 14	Easy, a lot of info I knew before starting this class.
Student 16	Easy. I feel like it appealed to many things that I was already good at.
Student 17	It was easy because it was well explained.
Student 18	Easy, due to its accessibility.
Student 19	On the easier side because less critical thinking work and more useful knowledge prep.

Table 53

Difficulty of Course - Off-Campus Student Responses

Student Identifier	Off-Campus Student Response
Student 1	Easy. I already was familiar with the content.
Student 3	Difficult, it is hard talking about myself so much.
Student 4	No. I've had prior experience.
Student 7	Easy, because the content is common sense, and very easy to comprehend.
Student 12	Easy/medium because all the work is easy but can be harder if your not creative.
Student 16	Easy because of the good instruction.

Student 20	Easy material but difficult because for the most part we have little to no experience yet doing what this course teaches us.
Student 21	Easy because it is a very straight forward course.
Student 22	Easy if you did the work and studied accordingly.
Student 24	This course was difficult yet the helpfulness and the helpfulness of my professor made it easy.
Student 31	Easy workload was manageable, concepts were easy to understand and level of interest in topics discussed is probably higher than average for most college courses given that this material was actually useful in the future.
Student 40	Easy, reasonable amount of homework.
Student 44	Class was both easy and difficult.
Student 45	In between. Testing format wasn't the best.
Student 48	Easy, assignments were not too difficult.
Student 55-a	Was fairly easy for the most part, the work wasn't to protruding.
Student 55-b	This was a little bit of both. It was easy to create the assignments, however, I did have to put effort into the mock interview because I really wanted to feel as if it were the real thing. Not that it was difficult, per se, just not a breeze to get through.
Student 65	It was fairly easy. This is due to the two weeks we had in between to study and work assignments.
Student 69	Easy.
Student 72	Easy, instructor made the class enjoyable to attend.
Student 79	It was easy because it was interesting and helpful.
Student 87	I believe this course was neither easy or difficult. All the assignments fostered my learning in a positive way.
Student 92	Easy, we were given the right material to succeed.
Student 99	It was moderate, some critical thinking was involved.

Note. The 55(a) and 55(b) anonymized student identifier was given to two off-campus students to avoid duplication. Students were allowed to choose their own identifier number.

The responses from both student groups to Q3 revealed that (1) most students assessed the course as being easy, and (2) a few students described the course as average to difficult.

Student Responses – Post-Course Survey Questions 4 and 5

The fourth and fifth open-ended question in the post-course student survey (Q4 and Q5) asked the students to indicate if the course schedule influenced their response to Q3. The responses to Q4 and Q5 are provided in Table 54 and Table 55.

Table 54

Course Difficulty Because of Compressed Schedule - Off-Campus

Student Identifier	Off-Campus Student Response
Student 1	No.
Student 3	Yes, a lot of useful information is crammed where it should take more time to process.
Student 4	No.
Student 7	The difficult part of the compressed schedule is the weekend.
Student 12	No, the SIU Extended Campus at CCNC is Awesome because of compressed schedule. This is the way to go!
Student 16	No, it is an easier schedule.
Student 20	No, it was easier because of it.
Student 21	No, the compressed schedule keeps everything fresh in your mind and the workload wasn't too much.
Student 22	No, allows me to focus on one class specifically. Dedicate all of my time to only one course.
Student 24	No, the compressed schedule made it easier to manage my work.
Student 31	No. Some other classes I've taken have been difficult because time management was absolutely essential to pass the course, but this particular class had an easy workload.
Student 40	Yes, class was difficult, not as much time to process info, really have to study.
Student 44	No it was not.
Student 45	No. Teacher gave us enough time to do all of our work.
Student 48	No, in college you should know how to be good at scheduling.
Student 55(a)	No, it was fair for the schedule.
Student 55(b)	I didn't feel rushed to complete any assignments. Most of the time, we were given class time to do homework. This made it feel a lot less stressful when it came time to do assignments outside of class.
Student 65	No, the course gave ample time to complete assignments.
Student 69	No.
Student 72	This course no, but others with more intense writing assignments were.
Student 79	No.
Student 87	I do not believe so.
Student 92	No.
Student 99	No, not a crazy amount of work.

Note. The 55(a) and 55(b) anonymized student identifier was given to two off-campus students to avoid duplication. Students were allowed to choose their own identifier number.

Table 55

Course Easier Because of Traditional Schedule - On-Campus

Student Identifier	On-Campus Student Response
Student 1	I don't see any challenge or ease.
Student 3	No response.
Student 4	It made it less enjoyable not difficult.
Student 5	How often we met was a good schedule.
Student 6	No response.
Student 7	No.
Student 8	Yes, it fits in with my availability and my other classes, it flows easier this way.
Student 10	No, I liked the traditional schedule.
Student 13	Yes, this benefited from being in person and it made it easier to understand the information.
Student 14	Yes.
Student 16	Unsure. I have nothing to compare it to. With only meeting one time per week, it may have been nice to not have such long gaps between material.
Student 17	I wouldn't say it was easier because it was traditional, I think I would have preferred compressed schedule.
Student 18	Yes, it was a balanced workload.
Student 19	No.

The majority of the off-campus students did not think the course was more difficult to complete due to the compressed course schedule. Approximately 50% of the off-campus students stated they thought the course was easier to complete due to the traditional course schedule.

Student Responses – Post-Course Survey Question 6

The final open-ended question in the post-course survey (Q6) asked students to indicate if the course was a good learning experience. The responses to Q6 are provided in Table 56 and Table 57.

Table 56

Course Was Good Learning Experience - On-Campus

Student Identifier	On-Campus Student Response
Student 1	Yes, career development focused on aviation.

Student 3	Yes, helped me improve resume and business card.
Student 4	Yes, learned a lot and made helpful tools for my future.
Student 5	It was a good learning experience because there was a lot I didn't know or know how employers wanted to see the resumes, interviews, and cover letters.
Student 6	Yes.
Student 7	Yes. Prof Miller was a joy to have as an instructor. Her knowledge of the industry made the class engaging and empowering. One of the best professors in the Aviation Management program. Thanks!
Student 8	Yes, I now have much greater knowledge of the job market and how to do well in the search for my career.
Student 10	Yes, because I learned about some of the best ways to engage employers and learn what is beneficial to stand out.
Student 13	Yes, the class covered helpful info that can be used in life and help people out in the long term.
Student 14	Yes, good skills to make advancements in my career.
Student 16	Yes, I feel more confident in my ability to stand out as a candidate in the professional workforce. The cover letter lesson was the most useful, as I've practiced resumes for years but had never actually made a cover letter before this class.
Student 17	It was a great learning experience. I would say it is also an important class that sets you up for success.
Student 18	Yes, it provided me with useful skills.
Student 19	Yes, because I learned a lot of valuable information to help me find and acquire jobs after school.

Table 57

Course Was Good Learning Experience - Off-Campus

Student Identifier	Off-Campus Student Response
Student 1	No response.
Student 3	Yes, this course is probably the most beneficial one I've taken for my future in this industry.
Student 4	Yes, provided structure for interview process.
Student 7	Yes, gain professional experience.
Student 12	Yes, because it is important info to learn and not some awful English, writing, or art course that is absolutely pointless.
Student 16	Yes, good knowledge to learn.
Student 20	Yes, it opened up my mind to things I haven't thought about yet. Now I know what I need to start doing and work on it.
Student 21	Yes, it teaches valuable things we will use in our career unlike some other classes in the program.
Student 22	Yes, it aided in helping me develop my professional life. Additionally, it helped me in improving my social and communication skills. Finally, it enhanced my interviewing abilities.

Student 24	Yes, we have learned information that will greatly help us throughout our careers.
Student 31	From the standpoint of SIU, this was a good learning experience…But I much preferred learning on Zoom than in-person classes this semester because I can't stand 70% of the people in this classroom and I very much preferred when I didn't have to listen to their terrible opinions on social issues because they muted themselves during class breaks.
Student 40	Very good, offered information no other teachers mentioned.
Student 44	No response.
Student 45	Yes, great way to learn how to get that dream job in the future.
Student 48	Yes, I learned more about the airline interview.
Student 55(a)	I would say it wasn't great but it wasn't bad. I learned a little but it wasn't enjoyable unless it wasn't for my fellow colleagues.
Student 55(b)	Yes, I feel way more prepared for a professional career than when I first begun the class. The techniques, tips, and tricks taught throughout the entire course made me more confident that I am ready to take a closer step towards my professional goals.
Student 65	Yes, this class helped me prepare for my future and was not too challenging.
Student 69	Yes.
Student 72	Yes, it seemed as though compared to other classes less material was covered; however, because there was less it was easier to understand, and I feel as though I got more out of this course.
Student 79	Yes, because it actually helps us prepare for the future and gives us things that we can use.
Student 87	Yes, everything I learned will apply to my life, and the workload felt fair for the compressed schedule.
Student 92	Yes, it prepared us for future interviews.
Student 99	I would say moderate, some aspects helped with preparing me for my career.

Note. The 55(a) and 55(b) anonymized student identifier was given to two off-campus students to avoid duplication. Students were allowed to choose their own identifier number.

The prevalent themes that emerged from both student groups to Q6: (1) the students believed that the course was a good learning experience, and (2) the skills and information they gained from the course will help them pursue their careers.

The quantitative and qualitative data from this research study has been collected and analyzed. Based upon the data, conclusions can be formed to answer the three research questions. This data will allow the researcher to provide recommendations and identify potential areas for future research.

CHAPTER V

CONCLUSIONS

The purpose of this research was to determine whether students enrolled in off-campus courses with compressed schedules are receiving the same quality of instruction and producing the same SLOs, as students enrolled in traditional on-campus 16-week courses. This research is crucial to determine if students are receiving the same educational experience when completing the same course using the two different modalities. Focusing on the student learning objectives and the assessments used to determine if the student learning objectives were successfully achieved could allow educators to ensure parity between the two modalities.

Conclusions Based on Research Question 1 (RQ1)

The first research question (RQ1) stated, "Is there any variance in overall student academic performance after two groups of undergraduate students complete the same Aviation Industry Career Development (AVM 305) course taught in two different modalities?" An independent samples *t*-test was conducted in SPSS to determine if there was a significant difference between the on-campus and off-campus final course grades. There was no significant difference found between the on-campus (M=83.4, SD=10.3) and off-campus (M=86.3, SD=10.2) courses; t(36) = -.819, p = .420. These results suggest that the delivery format of the

course (traditional 16-week format or compressed off campus weekend format) did not result in meaningful differences in the final course grades for the participating students.

Conclusions Based on Research Question 2 (RQ2)

The second research question (RQ2) stated, "If there is a variance, which group of students earned higher academic grades on the course performance assessments?" An independent samples *t*-test was conducted in SPSS to determine if there was a significant difference between the on-campus and off-campus final course grades. There was no statistically significant difference found between the final grades for the on-campus and off-campus courses. Although there was no significant statistical difference between the two groups of students, there were small differences in the scores. The mean final grade for the on-campus students was M=83.4% with a standard deviation of SD=10.3. The mean final grade for the off-campus students was M=86.3% with a standard deviation of SD=10.2. The off-campus compressed schedule students earned a slightly higher final course grade as compared to the on-campus traditional schedule students.

Conclusions Based on Research Question 3 (RQ3)

The final research question (RQ3) stated, "Are there any variations in overall student academic performance regarding specific performance assessments and the corresponding SLOs between the two student groups?" Both the on-campus traditional schedule and off-campus compressed schedule students both demonstrated a moderate to strong positive correlation between the final course grade; (1) total quiz score, (2) cover letter grade, (3) resume grade, and (4) interview grade. Certainly, the grades on assignments and quizzes had a direct impact on the final grade students earned in the class. More importantly, both groups of students performed

similarly on course assignments and quizzes. Both the on-campus and off-campus students experienced a positive correlation between their final grade for the course and assignments and quizzes. This positive correlation was consistent with total quiz grades, which demonstrated the students' ability to learn the course material for student performance assessments. Likewise, this positive correlation was also shown with writing-based assignments such as the cover letter and resume assignments. Overall, both groups of students earned similar grades on quizzes and assignments, along with similar positive correlations. The *t*-test indicated that there was no statistically significant variation between student academic performance, for both groups of students, and SLOs.

Concluding Remarks

Although there was no finding of significant statistical differences between the two groups of students, several factors require analysis as they may inform researchers of the reasons for the small variations in academic performance between the two groups. First, the compressed course schedule allows students to concentrate on fewer courses at one time during the semester. This concentration may allow students to engage in a deeper learning experience during the compressed courses. The compressed format provides a more concentrated and focused learning experience. A more focused and immersive learning experience for the compressed schedule students resulted in slightly higher scores on the assignments and quizzes. The off-campus compressed schedule students earned higher scores on writing-based assignments such as cover letter, resume, and discussion posts than their on-campus counterparts. Furthermore, the off-campus students earned a higher average quiz grade as compared to the on-campus students. More importantly, these scores indicate that the spacing effect did not impact the compressed schedule students' ability to learn the course material. The spacing effect is "a cognitive

phenomenon in which distributing to-be-learned information across time in short, interrupted study sessions leads to better long-term retention than continuous, massed sessions" (Spacing Effect, n.d., para. 1). The research findings indicate the spacing effect did not affect the compressed schedule students' ability to retain course material. The more immersive learning experience that accompanies the compressed course schedule is not necessarily a wise choice for all students. It is important to note that all students are different, and the compressed course schedule can be overwhelming for some students.

Despite the negative effect that compressed schedules can have on the learning experience, due to the spacing effect, the compressed schedule can increase focus and decrease procrastination amongst students. Previous research findings indicate decreased procrastination with students in compressed schedule courses, and this appears to hold true with the compressed schedule students in this research. The compressed schedule sample consisted of 26 students, and they did not submit a total of 3% of the assignments during the course duration. Conversely, the traditional schedule sample consisted of 14 students, and they did not submit a total of 6% of the assignments. It can be concluded, based upon the research findings, the traditional schedule on-campus students had more time throughout the semester to procrastinate. Due to the procrastination, some students were unable to "catch up" and complete some of the assignments.

Next, it is necessary for the compressed courses to provide the same SLOs and to cover the same course material. The SLOs are what the student is expected to learn. The SLOs make clear what students will know and the observable skills acquired after course completion. They provide evidence that learning has taken place during the course. The student performance assessments allow the faculty to determine if the SLOs were achieved. In contrast, grades evaluate student performance and quality of a student's work. Based upon the quantitative

analysis, the SLOs were achieved with both groups of students, although the compressed schedule students, based upon their grades, exhibited a higher quality of work.

The next issue of concern is the effect of compressed course schedules on the overall educational value for students. Introducing large amounts of course content to students, in a short amount of time, may decrease the educational value for some students. Specifically, parity of academic rigor and breadth of knowledge must be maintained for all students. Academic rigor and breadth of knowledge are important components of educational value. Academic rigor is a standard of quality that faculty expect of their students. The standards to measure academic rigor can vary in objectivity based upon the performance assessment used. Breadth of knowledge refers to the extent or span of knowledge which a student possesses about a subject. The research indicates the students from both modalities performed similarly with the same standards of academic rigor and demonstrated comparable breadth of knowledge. Although there was no significant statistical variation regarding overall performance between the two groups of students, the compressed schedule students earned a slightly higher median course grade (M = 83.43), which may indicate a greater breadth of knowledge concerning the subject matter. The findings from this research study corroborates the findings of previous research that indicated academic integrity is the same for courses taught in the traditional and compressed schedule formats.

The compressed schedule itself may promote an increased quality of learning experience for the student. The quality of the student learning experience is influenced by the characteristics of the faculty, teaching methods, classroom environment, and evaluation methods. The faculty, teaching methods, and evaluation methods were the same for both modalities; however, the classroom environment was not the same. Courses offered in a compressed format promote the

ability of students to quickly build relationships with professors and other students, which increased interaction and participation in class by students. The researcher observed in the classroom setting that the compressed schedule students, as compared with the traditional schedule students, interacted more with each other and the instructor before, during and after class. This interaction had a positive impact on the classroom environment for the compressed schedule students.

There was no statistical difference, yet a strong positive correlation, for both groups of students, between GPA and the grades earned on quizzes and assignments, along with the final course grade. The correlation indicates that students with a high GPA, presumably high academic performers, will perform well regardless of the course format.

Both groups of students displayed a moderate-to-strong positive correlation between their academic status and the level of interest in the course material. Based upon the qualitative data collected in the pre- and post-course surveys, this correlation can be attributed to the students that are preparing to graduate seeing greater value in career development-related assignments. When asked about their level of interest in aviation career development, both groups of students had a moderate-to-high level of interest. It can be concluded both groups of students, based upon the responses to the open-ended questions in the pre-course survey, recognized the connection between the information provided in the course with developing a successful career in the aviation industry.

Most students viewed college education as a necessary tool to pursue a career in aviation. As a result, the students had a high level of motivation to complete a college degree because they were eager to begin their career in the aviation industry as commercial pilots. The students provided a similar response to the open-ended question in the post-course survey when asked

what they viewed as the best aspects of the course. The majority of students revealed that they valued those aspects of the course that contributed to their ability to pursue a career in the aviation industry.

Interestingly, both groups of students indicated the course was easy, regardless of course format. The responses from on-campus students in the post-course survey revealed that most students assessed the course as being easy, and a few students indicated that the level of difficulty was average. The responses from off-campus students revealed that most students assessed the course as easy, a few indicated that the difficulty was average, and two students described the class as difficult. Approximately 50% of the on-campus students stated they thought the course was easier to complete due to the traditional course schedule, and most off-campus student responses indicated they did not think the course was more difficult to complete due to the compressed course schedule. The off-campus student responses indicating they did not think the compressed schedule increased the level of difficulty of the course aligns with previous research findings. Finally, both groups of students indicated that the course was a good learning experience because the skills and information they gained from the course will assist with their careers. It is important to note that not all students possess the motivation and discipline to be successful in a compressed course; however, the majority of the compressed schedule students had the necessary skills.

The level of motivation and value placed upon the course material by students appears to be the dominant factor when determining educational experience for both groups of students in this research study. There was a low correlation between the number of scholarships earned by students and the final grade for the course. Furthermore, the same low correlation was found

between the number of English courses taken by students within the past two years and grades on writing-based assignments.

The qualitative data provided in the responses to the open-ended questions explain why there was a positive correlation between level of interest, academic status, and grades earned on quizzes and assignments. The students believed that there was a direct link between the course material and their success in the aviation industry. These students are highly motivated to earn a college degree and to achieve the SLOs for the course, to help them achieve their career goals.

There are several disadvantages to the compressed schedule courses. First, students may struggle to study and comprehend the course material and can quickly fall behind in the course. The volume of material was not a problem for the compressed schedule students in this research study. The data strongly suggests that the disadvantages associated with compressed course schedules had no significant effect on the compressed schedule student performance in this research study. It is important to note that not all students possess the motivation and discipline to be successful in a compressed course; however, the majority of the compressed schedule students in this research study had the necessary skills.

Recommendations

Based on the findings and conclusions of this research study, the following recommendations have been formulated:

1. All students must receive the same quality of instruction and educational experience regardless of modality. To maintain parity between the student groups, similar curriculum, including course assignments and quizzes, must be used in both courses regardless of course schedules. Academic programs that provide courses using different

modalities need to ensure that one master syllabus is used for both courses regardless of course schedules. To this end, the master syllabus must provide an accurate and concise course description and objectives. The course objectives must coincide with the course description. The course objectives need to establish that the course content provided in the course description will be covered in the course. Next, the SLOs need to coincide with the course objectives and the academic program's SLOs. Providing consistency with these key components within the curriculum and master syllabus is key to providing the same educational learning experience for all students regardless of modality.

2. The ability of students to meet or exceed academic standards is influenced by the quality of the learning experience received by the student. The quality of the student learning experience is considerably influenced by the characteristics of the faculty. Faculty are responsible for the overall learning experience provided to the students. It is essential that faculty have an enthusiasm for teaching. Faculty must also be willing to learn from and engage with the students. This can be particularly challenging in compressed format courses if the faculty does not enjoy teaching courses in a compressed format. The compressed format allows for students to engage in a deeper learning experience. The quality of the student learning experience is influenced by the characteristics of the faculty, teaching methods, classroom environment, and evaluation methods. The faculty, teaching methods, and evaluation methods were the same for both modalities in this research study; however, the classroom environment was not the same. Courses offered in a compressed format promote the ability of students to build relationships quickly with professors and other students. This increased student interaction and participation in class. The off-campus compressed schedule students, as compared with the traditional

schedule students, interacted more with each other and the instructor before, during and after class. This interaction positively affected the classroom environment for the compressed schedule students. Faculty that teaches compressed format courses need to establish relationships with students and engage with them in the classroom environment. As this is an essential component to student success, not all faculty are well suited to teach a compressed format course.

3. It is important to recognize that not all students, courses, and faculty are well suited for the compressed schedule modality. Certain variables need to be considered when deciding to offer a course in the traditional or compressed format. The students' level of interest in the course material is important as this indicates if the students perceive any value in the material. The students may have a high level of interest in the course material if they believe that it will help them achieve their career goals. Academic status, credit hour enrollment, and GPA may also be influencing factors when determining student success in compressed and traditional schedule course formats. Academic status is influenced by the students' motivation to complete their college educations. Consequently, the value of a college education is directly linked to the students' ability to pursue their careers. Student GPAs indicates that those academic high achievers will typically do well regardless of course modality.

This research study used a homogenous student sample with little diversity. Although this research study was not able to analyze different student demographics, these are important factors that need to be considered when determining course formats. Age, gender, ethnicity, highest level of education, the quality of prior education, and military experience may influence the learning experience for students in varying course modalities. One size does not fit all when

determining a course modality that will provide the best learning experience for students. Institutions of higher learning need to consider many factors based upon the course material, faculty, and student demographics. Not all courses, students, and faculty are suited for a compressed schedule format.

Further Research

The research concluded that there was no significant statistical variation between the two student samples. Both student samples completed the course using in-person instruction with the variable being the course schedule. It would be worthwhile to compare the performance of two groups of student samples with one group of students completing the course using an in-person modality and another group of students completing the course online. The course schedule would remain the same, yet the modality of delivery, online versus in-person, would be the variable to be analyzed. Another variable for analysis would be the delivery of the course using the synchronous or asynchronous online course models. It is imprudent to assume that all courses should be offered in the same modality and will yield the same SLOs.

Next, most of the students in this research saw value in the course. The skills and information gained from the course will help them find employment as professional pilots. The career development skills gained from the course will provide direct benefits to the students as they pursue their careers. Most of the students in the sample intended to pursue a career as a professional pilot. Would the results of this research have been different if the students completed a course in which they were not interested? Would the results have been different if a technical writing and communication course were used to complete the study? A similar study, involving a course of less interest to the students would provide valuable information to institutions of higher learning. Such a study would assist institutions of higher learning to

determine the appropriate modality for various courses within the curriculum. Again, it cannot be assumed that all courses offered in a curriculum should be offered in the same modality.

Third, further research with a more diverse student sample may yield varying results. This research study used a homogenous demographic sample. The student population in higher education is becoming increasingly diverse and a research sample could provide insight concerning how differing groups of students perform in courses based upon modality and level of interest in the subject matter. The demographic diversity should include variations in age, gender, and race.

Finally, a student sample of aviation management students (non-pilot) is needed. The qualitative data of this research indicated the students were highly motivated to complete the course because the students were eager to begin their careers as professional pilots. Are aviation management students as motivated as the aviation flight students? The qualitative data from the pre- and post-course student surveys may reveal variables that would explain any significant statistical variations in course grades. The results would assist collegiate aviation programs to determine modality of courses to be delivered to students within the program to ensure that the SLOs are commensurate regardless of which aviation-related degree the student is pursuing.

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APPENDICES

APPENDIX A

Cover Letter

Do Compressed In-Person Classes Yield Student Performance Results Comparable to Traditional 16-Week In-Person Classes - A Mixed Methodology Approach

Institutions of higher learning are offering an increasing number of compressed in-person classes with the goal of providing to their diverse student populations flexibility of instruction delivery. The compressed courses offer the same number of student contact hours as the traditional 16-week courses. Southern Illinois University (SIU) offers a Bachelor of Science in Aviation Management (AVM) at off-campus locations in cooperation with other institutions of higher learning and military installations. SIU provides an option for students who cannot attend in-person classes offered in the traditional 16-week format, but do not want to take online classes. It is necessary for the compressed courses to provide the same student learning outcomes and cover the same course material.

The purpose of this research study is to determine if students enrolled in off-campus classes with compressed schedules are receiving the same quality of instruction and producing the same student learning outcomes, as students enrolled in traditional on-campus 16-week courses.

This study will compare the performance of two groups of undergraduate students enrolled in the same SIU course that is delivered in two different modalities. Data will be collected from students enrolled in the AVM 305: Aviation Industry Career Development course taught in the traditional 16-week classroom setting on the SIU campus, and from the students enrolled in the off-campus course taught in the compressed format. The courses will use the same curriculum and be taught by the same instructor. The data will consist of course grades associated with student performance assessments and student information collected using a student pre and post course survey.

The researcher, Irene Miller, Oklahoma State University doctoral candidate, strongly believes the information obtained in this research is crucial to ensure students are receiving the same educational experience when completing the same class using the two different modalities.

Your participation in this research study is strictly voluntary. Your grades and responses to the survey questions will remain confidential. The class instructor/principal investigator will not know who signed the consent form until after the final grades for the course are posted. Your responses to the survey questions will be used solely for research analysis.

If you have any questions regarding this study, please contact Irene Miller at irene.miller@okstate.edu or Dr. Timm Bliss at timm.bliss@okstate.edu.

APPENDIX B

Consent Letter

OKLAHOMA STATE UNIVERSITY

COLLEGE OF EDUCATIONAL FOUNDATIONS, LEADERSHIP, AND AVIATION

PARTICIPANT INFORMATION AND CONSENT FORM

Project Title: Do Compressed In-Person Classes Yield Student Performance Results Comparable to Traditional 16-Week In-Person Classes – A Mixed Methodology Approach.

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Purpose: The purpose of this research study is to determine if students enrolled in off-campus classes with compressed schedules are receiving the same quality of instruction and producing the same student learning outcomes, as students enrolled in traditional on-campus 16-week courses.

This study will compare the performance of two groups of undergraduate students enrolled in the same SIU course that is delivered in two different modalities. Data will be collected from students enrolled in the AVM 305: Aviation Industry Career Development course taught in the traditional 16-week classroom setting on the SIU campus, and from the students enrolled in the off-campus course taught in the compressed format. The courses will use the same curriculum and be taught by the same instructor. The data will consist of course grades associated with student performance assessments and student information collected using student pre and post course surveys.

Procedures: The quantitative data, provided by the student performance assessments, will be collected based up the following course components:

- 6 Discussion posts
- 3 Quizzes
- 4 Assignments
- Attendance and participation (includes in-class activities/assignments)

The following components will be used to collect qualitative data that will be used to validate the quantitative data (grades) collected from the student assessments (assignments and quizzes):

- Student participation during lectures
- Student behavior and interaction during class activities

- Attendance
- Student surveys completed at the beginning and end of the course

Participation in the research will involve completion of several surveys.

The pre-course survey consists of 22 questions comprised of closed and open-ended questions. The post-course survey has two sections. The first section is comprised of 10 statements with a Likert scale response. The second section consists of six open ended questions.

The Instructor Course Evaluation survey is completed by students at SIU to evaluate the effectiveness of the course and instructor.

You will be expected to complete each survey once.

Risks: There are no risks associated with this project which are expected to be greater than those ordinarily encountered in daily life.

Benefits: There are no direct benefits to you. However, you will contribute to research that will specifically analyze the performance of students enrolled in an aviation management-related class offered in the traditional on-campus 16-week format versus the off-campus six-week compressed schedule. This research is crucial to determine if students are receiving the same educational experience when completing the same class using the two different modalities. Focusing on the student learning objectives and the assessments used to determine if the student learning objectives were successfully achieved will allow educators to make adjustments to ensure parity between the two modalities.

Your Rights and Confidentiality: Your participation in this research is voluntary. There is no penalty for refusal to participate, and you are free to withdraw your consent and participation in this project at any time. The class instructor/principal investigator will not know who signed the consent form until after the final grades for the course are posted. The records of this study will be kept private. Any written results will discuss group findings and will not include information that will identify you. Research records will be stored on a password protected computer in a locked office. Data will be destroyed three years after the study has been completed.

Contacts: Should you desire to discuss your participation in the study and/or request information about the results of the study; please contact Dr. Timm Bliss at timm.bliss@okstate.edu.

If you have questions about your rights as a research volunteer, you may contact the IRB Office at irb@okstate.edu or (405) 744-3377.

Signatures:

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy of this form has been given to me.

_____ _____

Signature of Participant Date

I certify that I have personally explained this document before requesting that the participant sign it.

_____ _____

Signature of Researcher Date

APPENDIX C

Research Instrument – Student Pre-Course Survey

Student Pre-Course Survey

Participant Number: _____

1. What is your gender?
    a. Male [ ]
    b. Female [ ]
    c. Prefer not to answer [ ]
2. What is your date of birth? _____ month & _____ year
3. What is your ethnicity?
    a. Black or African American [ ]
    b. Hispanic/Latino [ ]
    c. White [ ]
    d. Other [ ]
    e. Prefer not to answer [ ]
4. What is your status?
    a. First [ ], second [ ], third [ ] or fourth [ ] year undergraduate student
5. Have you every served in the military?
    a. If yes, how many years of service? _____
    b. Which branch of service? _____
    c. What was your job or specialty in the military? _____
    d. What was your rank at discharge? _____
6. Are you an on-campus [ ] or off-campus [ ] student?
7. When is your projected graduation date? _____ semester & year
8. How many Aviation Management classes have you completed?

a. AVM core courses? _____

b. Independent Study classes (off-campus students)? _____

9. How many credit hours are you taking this semester? _____

10. Have you completed any college-level English courses within the past 2 years?

a. How many? _____

b. When? _____ month & year

11. What is the highest level of education you have completed?

a. Degree: Associate [ ] Bachelor's [ ] Other _____

12. What is your current GPA? _____

13. Have you been awarded any scholarships in the past 4 years?

a. If yes, what academic scholarships have you received?

14. What is your level of interest in aviation industry career development?

15. Will this course be useful in your career? Why and how?

16. Why are you pursuing this undergraduate degree?

17. What is the most important benefit to you of a college education?

18. How motivated are you to complete your college degree? Why?

19. Do you intend to pursue a career in the aviation industry?

    a. If so, what career opportunities within the aviation industry do you intend to pursue?

20. Are you currently working in the aviation industry?

    a. Where? _____

    b. How long? _____

    c. Job title _____

21. What are your career/professional goals?

22. Do you intend to pursue a graduate degree in the future?

a. Master's degree [ ]

    i. Field of study _____

b. Doctoral degree [ ]

    i. Field of study _____

APPENDIX D

Research Instrument – Student Post-Course Survey

Student Post-Course Survey

Participant Number: _____

	Strongly disagree (1)	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly agree (5)**	**N.A.**
This class was a good way to learn about aviation industry career development						
This class had a positive effect on my interest in aviation industry career development						
I was able to ask questions in this class and get helpful responses.						
Class discussions were encouraged						
I was able to analyze and discuss course materials in class						
In-class activities encouraged critical thinking						
I would recommend this class to other students						
This course provided me with a good understanding of the skills and strategies for career development						
This class will assist me as a pursue my career objectives						
This class was interesting						

Comments: In many ways your written comments can be the most useful feedback.

What are the **best** aspects of the course?

What are the **weak** aspects of the course?

Was this course easy or difficult? Why?

Was the course difficult because of the compressed schedule?

If so, Why?

Was the course easier because it was a traditional semester schedule?

If so, Why?

Overall, was this course a good learning experience?

If yes, explain why.

If no, explain why.

APPENDIX E

Instructor/Course Evaluation Survey

Instructor/Course Evaluation Survey

The Course:

1. I am taking this course to satisfy a requirement for:

The Course:

2. The resources provided (textbook, syllabus, online materials, etc.) were useful.

3. The amount of work was appropriate for a class of this level.

4. The course conformed to the syllabus and helped me achieve the learning objectives stated on it.

5. Attending class sessions improved my comprehension of subject matter.

6. Generally, I had a good learning experience in this course.

Response options	CC = Core Curriculum	MM = My major	BOT = Both of the above	NOT = Neither of the above

The Course:

7. I spent _____ hours per week studying for this course (outside of class).

8. Please feel free to provide additional feedback on the course (content, materials, workload) here.

The Instructor:

9. The instructor was knowledgeable about the course content.

10. The instructor effectively communicated the course content.

11. The instructor showed enthusiasm for the subject matter.

12. The instructor's presentation of material was organized.

13. The instructor showed interest in student success.

14. The instructor made expectations for assignments clear.

15. The instructor graded fairly and promptly.

16. The instructor was effective overall.

Response options	SA = Strongly Agree	A = Agree	Neutral = Neither Agree nor Disagree	D = Disagree	SD = Strongly Disagree

17. What are this instructor's strengths as an educator? What suggestions do you have for improvement?

18. Would you recommend this instructor or course to your friends? Why or why not?

19. What other questions/categories would you add to this assessment?

APPENDIX F

IRB Approval

from: IRB Office <irb@okstate.edu>

to: Timm Bliss <timm.bliss@okstate.edu>,

Irene Miller <irene.miller@okstate.edu>

date: Jun 24, 2021, 12:05 PM

subject: Approval of Exempt IRB Application IRB-21-256

Dear Irene Miller,

The Oklahoma State University Institutional Review Board (IRB) has approved the following application:

Application Number: IRB-21-256

PI: Irene Miller

Title: Do Compressed In-Person Classes Yield Student Performance Results Comparable to Traditional 16-Week In-Person Classes - A Mixed Methodology Approach

Review Level: Exempt

You will find a copy of your Approval Letter in IRBManager. Click IRB - Initial Submission to go directly to the event page. Please click attachments in the upper left of the screen. The approval letter is under "Generated Docs." Stamped recruitment and consent documents can also be found in this location under "Attachments". Only the approved versions of these documents may be used during the conduct of your research.

As Principal Investigator, it is your responsibility to do the following:

Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted for IRB approval before implementation.

Submit a request for continuation if the study extends beyond the approval period.

Report any adverse events to the IRB Chair within 5 days. Adverse events are those which are unanticipated and impact the subjects during the course of the research; and

Notify the IRB office when your research project is complete by submitting a closure form via IRBManager.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact the IRB office at 405-744-3377 or irb@okstate.edu.

Best of luck with your research,

Sincerely,

Dawnett Watkins, CIP

Oklahoma State University
Institutional Review Board
Office of University Research Compliance
223 Scott Hall, Stillwater, OK 74078
Website: https://irb.okstate.edu/
Ph: 405-744-3377 | Fax: 405-744-4335| irb@okstate.edu

VITA

Irene A. Miller

Candidate for the Degree of

Doctor of Education

Dissertation: DO COMPRESSED IN-PERSON CLASSES YIELD STUDENT PERFORMANCE RESULTS COMPARABLE TO TRADITIONAL 16-WEEK IN PERSON CLASSES – A MIXED METHODOLOGY APPROACH

Major Field: Applied Educational Studies

Biographical:

Education:

Completed the requirements for the Doctor of Education in Applied Educational Studies at Oklahoma State University, Stillwater, Oklahoma in May 2022.

Completed the requirements for the Master of Science in Space Studies at the University of North Dakota, Grand Forks, North Dakota in May 1996.

Completed the requirements for the Bachelor of Science in Aviation at The Ohio State University, Columbus, Ohio in June 1993.

Experience:

Adjunct/Assistant Professor – School of Aviation, Southern Illinois University, 1996 to Present.

Professional Memberships:

University Aviation Association

Women in Aviation International

Aircraft Owners and Pilots Association

American Association of Airport Executives